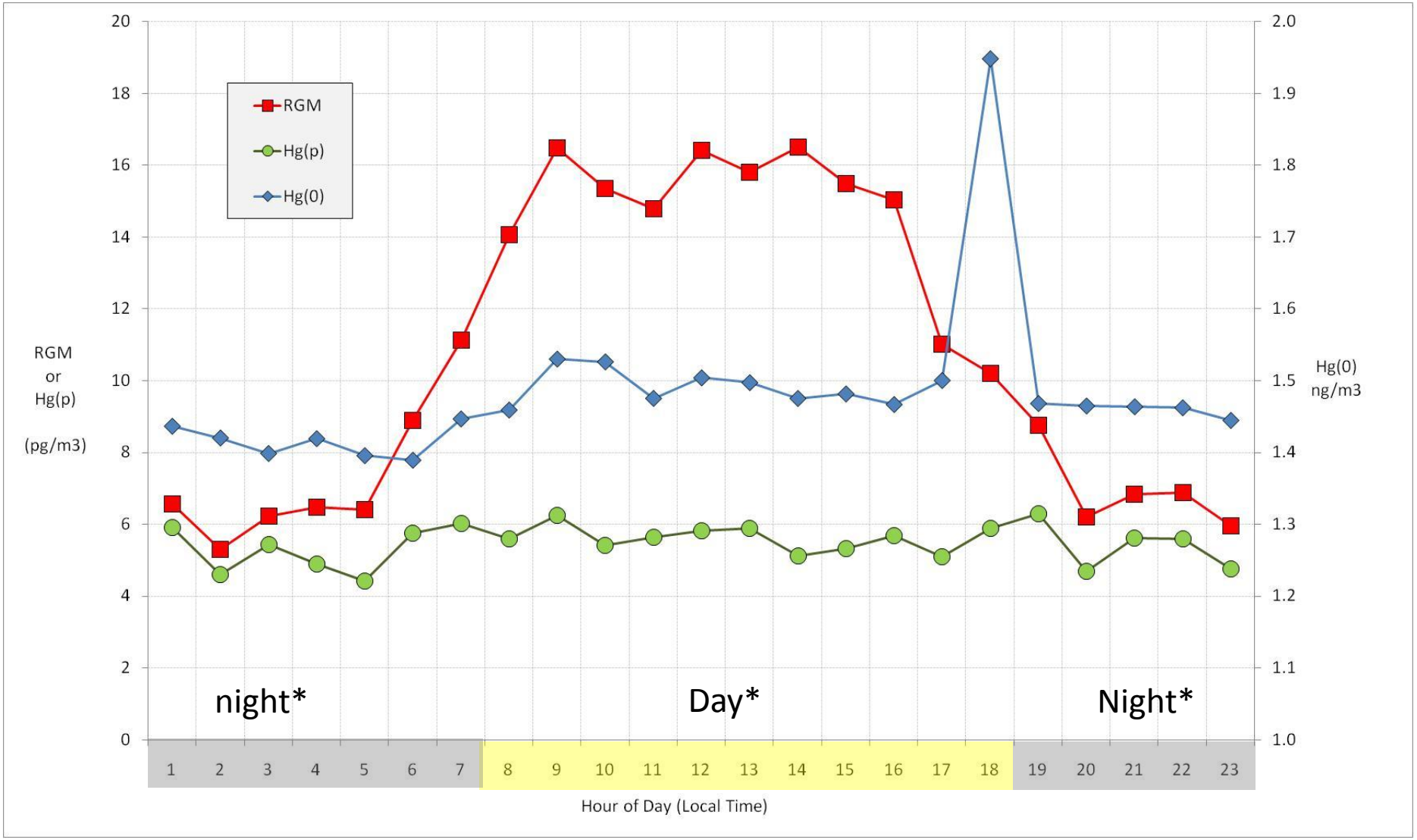
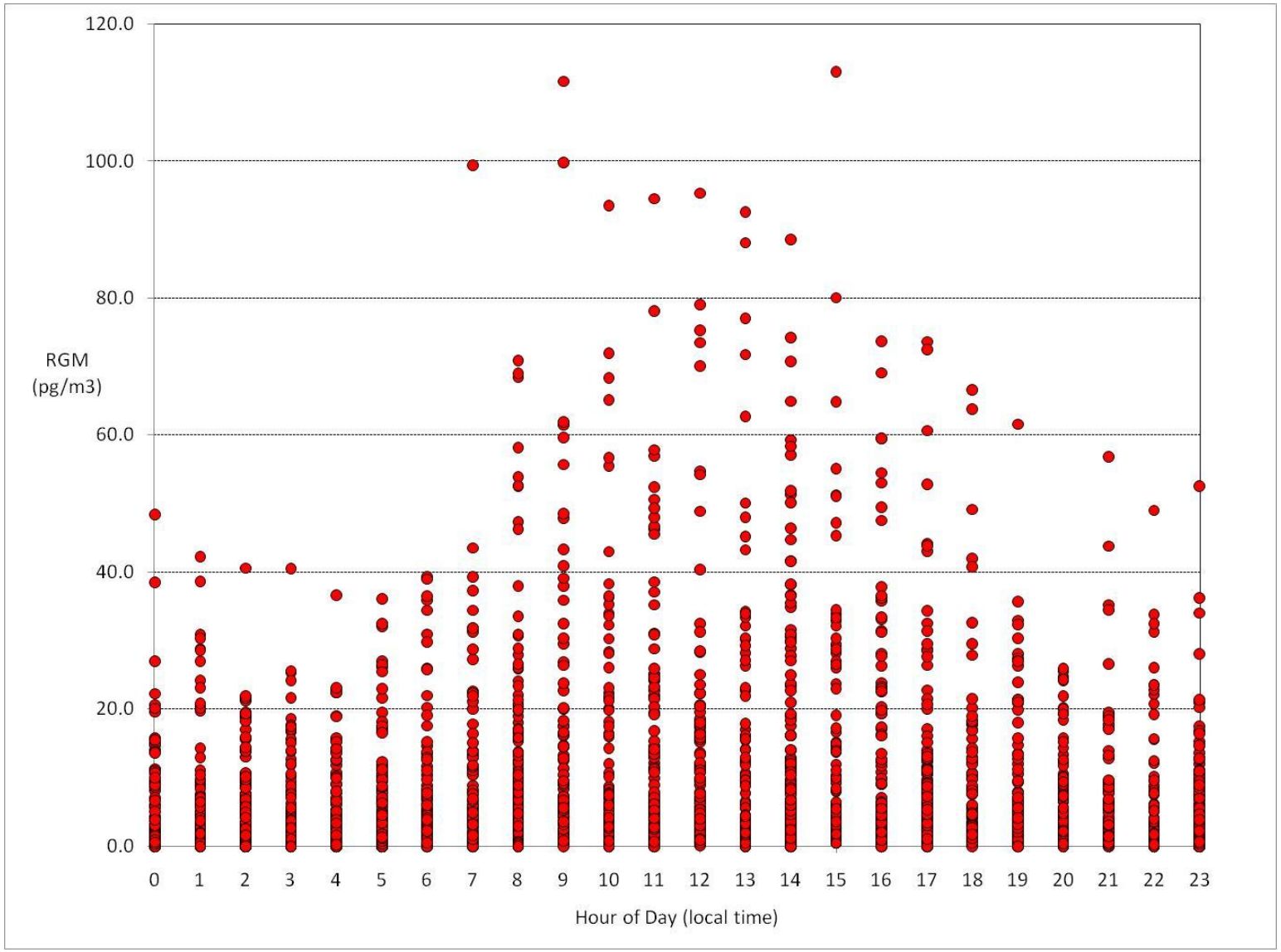


** For the purposes of the trajectory frequency analysis*


120.0
100.0
80.0
60.0
40.0
20.0
0.0
RGM
(pg/m3)
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
Hour of Day (local time)

RUN NUMBER	cut	time	species	run name (half pbl)	Number of Trajectories
1		year	all	01_pbl_all_year	8760
2		summ	all	02_pbl_all_summ	2208
3		fall	all	03_pbl_all_fall	2184
4		wint	all	04_pbl_all_wint	2160
5		sprg	all	05_pbl_all_sprg	2208
6		day	all	06_pbl_all_day	4015
7		ngt	all	07_pbl_all_ngt	4745
8	top	all	RGM	08_pbl_RGM_all_top	687
9	mid	all	RGM	09_pbl_RGM_all_mid	1374
10	bot	all	RGM	10_pbl_RGM_all_bot	687
11	top	day	RGM	11_pbl_RGM_day_top	315
12	mid	day	RGM	12_pbl_RGM_day_mid	630
13	bot	day	RGM	13_pbl_RGM_day_bot	318
14	top	ngt	RGM	14_pbl_RGM_ngt_top	369
15	mid	ngt	RGM	15_pbl_RGM_ngt_mid	741
16	bot	ngt	RGM	16_pbl_RGM_ngt_bot	372
17	top	all	HgP	17_pbl_HgP_all_top	693
18	mid	all	HgP	18_pbl_HgP_all_mid	1392
19	bot	all	HgP	19_pbl_HgP_all_bot	693
20	top	day	HgP	20_pbl_HgP_day_top	318
21	mid	day	HgP	21_pbl_HgP_day_mid	642
22	bot	day	HgP	22_pbl_HgP_day_bot	321
23	top	ngt	HgP	23_pbl_HgP_ngt_top	375
24	mid	ngt	HgP	24_pbl_HgP_ngt_mid	753
25	bot	ngt	HgP	25_pbl_HgP_ngt_bot	375
26	top	all	Hg0	26_pbl_Hg0_all_top	1082
27	mid	all	Hg0	27_pbl_Hg0_all_mid	2166
28	bot	all	Hg0	28_pbl_Hg0_all_bot	1082
29	top	day	Hg0	29_pbl_Hg0_day_top	494
30	mid	day	Hg0	30_pbl_Hg0_day_mid	992
31	bot	day	Hg0	31_pbl_Hg0_day_bot	494
32	top	ngt	Hg0	32_pbl_Hg0_ngt_top	586
33	mid	ngt	Hg0	33_pbl_Hg0_ngt_mid	1176
34	bot	ngt	Hg0	34_pbl_Hg0_ngt_bot	586

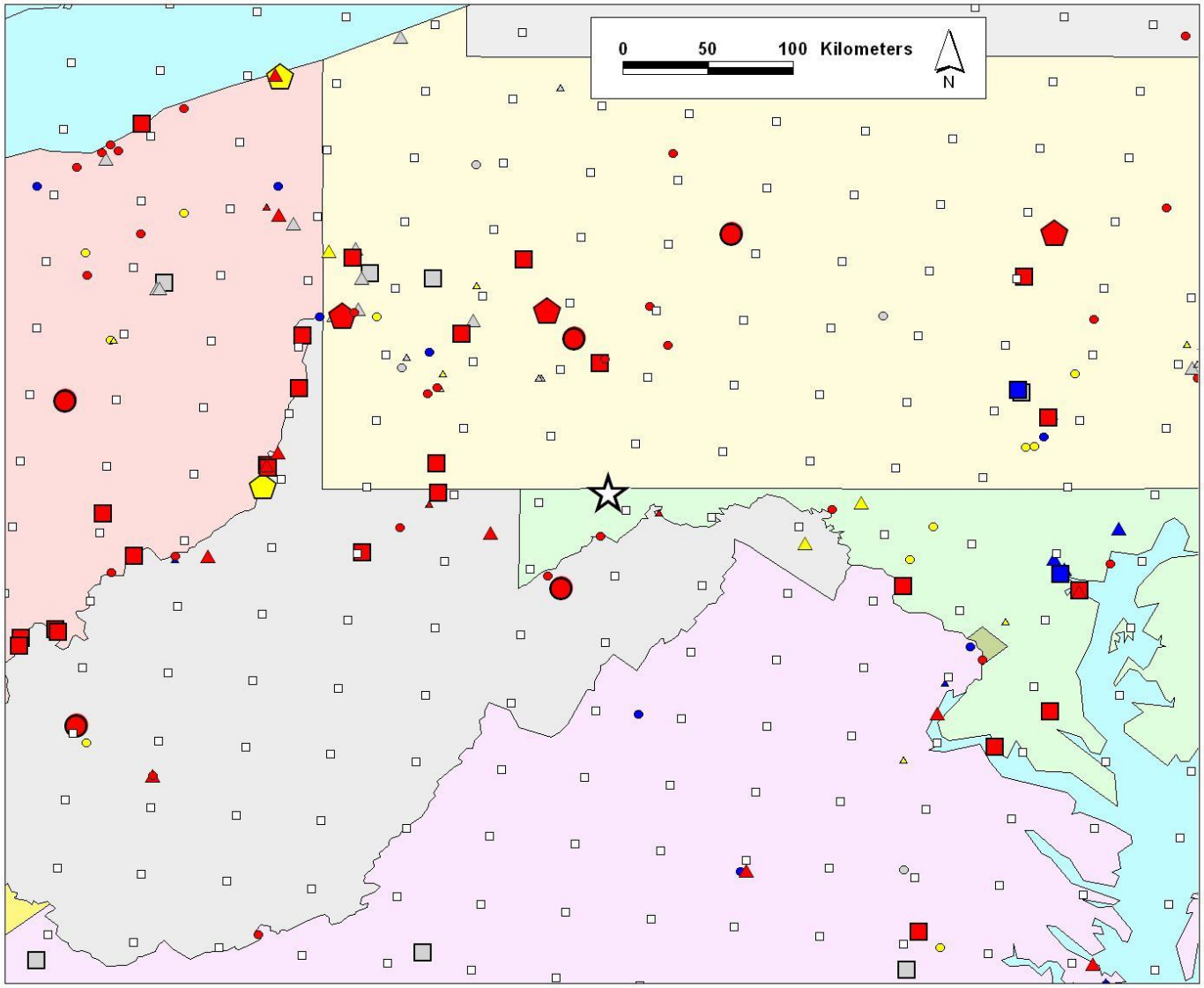
NOTES:

A	"top" means top 10% and includes trajectories arriving at start of two hr sampling period, after 1 hr, and at the end of the two hour sampling period (for RGM and HgP)
B	"bot" means bottom 10% and includes trajectories arriving at start of two hr sampling period, after 1 hr, and at the end of the two hour sampling period (for RGM and HgP
C	"mid" means middle 20% and includes trajectories arriving at start of two hr sampling period, after 1 hr, and at the end of the two hour sampling period (for RGM and HgP)
D	"day" means trajectories arriving between (and including) 8 AM local time and 6 PM local time
E	"ngt" means trajectories arriving between (and including) 7 PM local time and 7 AM local time
F	for Hg0, the data were reported for 1 hour values. The trajectory at the start and end of a particular hour was used to represent a given measurement. It is recognized that for measurements in consecutive hours, this would lead to a "double-counting" of the "middle" hour trajectory, if both hours met a given criteria (e.g., top 10%). But, it was decided that this was useful, as a 2 hr period with high or low values should be weighted a bit higher than a 1 hr period or high or low values.
G	the top 10% and bottom 10% groups do not always have the exact same number of trajectories, due to infinitesimal round-off errors in the percentile calculation
H	likewise, the middle 20% group does not always have exactly twice the number of trajectories as the 10% groups, due to infinitesimal round-off errors in the percentile calculation


EDAS 40km Grid Cell
Image PA Department of Conservation and Natural Resources-PAMAP/USGS
Image © 2009 TerraMetrics
Image © 2009 DigitalGlobe
Image © 2009 New York GIS
©2009 Google
1545 m
Imagery Dates: Apr 2004 - Aug 25, 2007
lat 39.591891° lon -78.973783° elev 676 m
Eye alt 5.87 km

Piney Measurement Site and Surrounding Region

with estimated 2002 emissions of total mercury and
EDAS 40km meteorological data grid used for back-trajectory analysis



Piney Measurement Site

EDAS 40km meteorological data grid used for back-trajectory analysis

Air Emissions

size/shape of symbol denotes amount of mercury emitted (kg/yr)

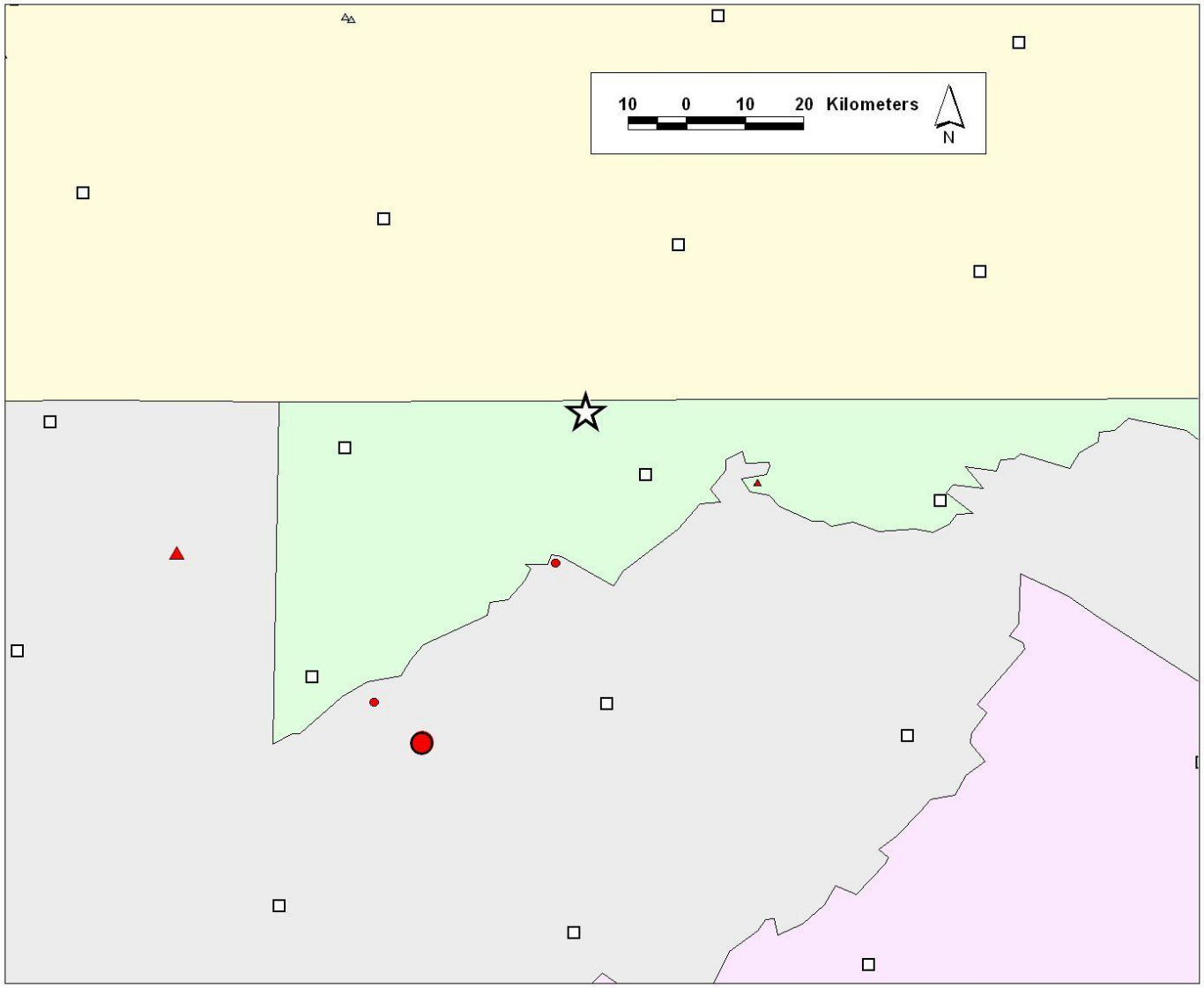
△	5 – 10
○	10 – 50
△	50 – 100
□	100 – 300
○	300 – 500
⬠	500 – 1000
⬡	1000 – 3500

color of symbol denotes type of mercury source

- coal-fired power plants
- other fuel combustion
- waste incineration
- metallurgical
- manufacturing & other

Piney Measurement Site and Surrounding Region

with estimated 2002 emissions of total mercury and
EDAS 40km meteorological data grid used for back-trajectory analysis



Piney Measurement Site

EDAS 40km meteorological data grid used for back-trajectory analysis

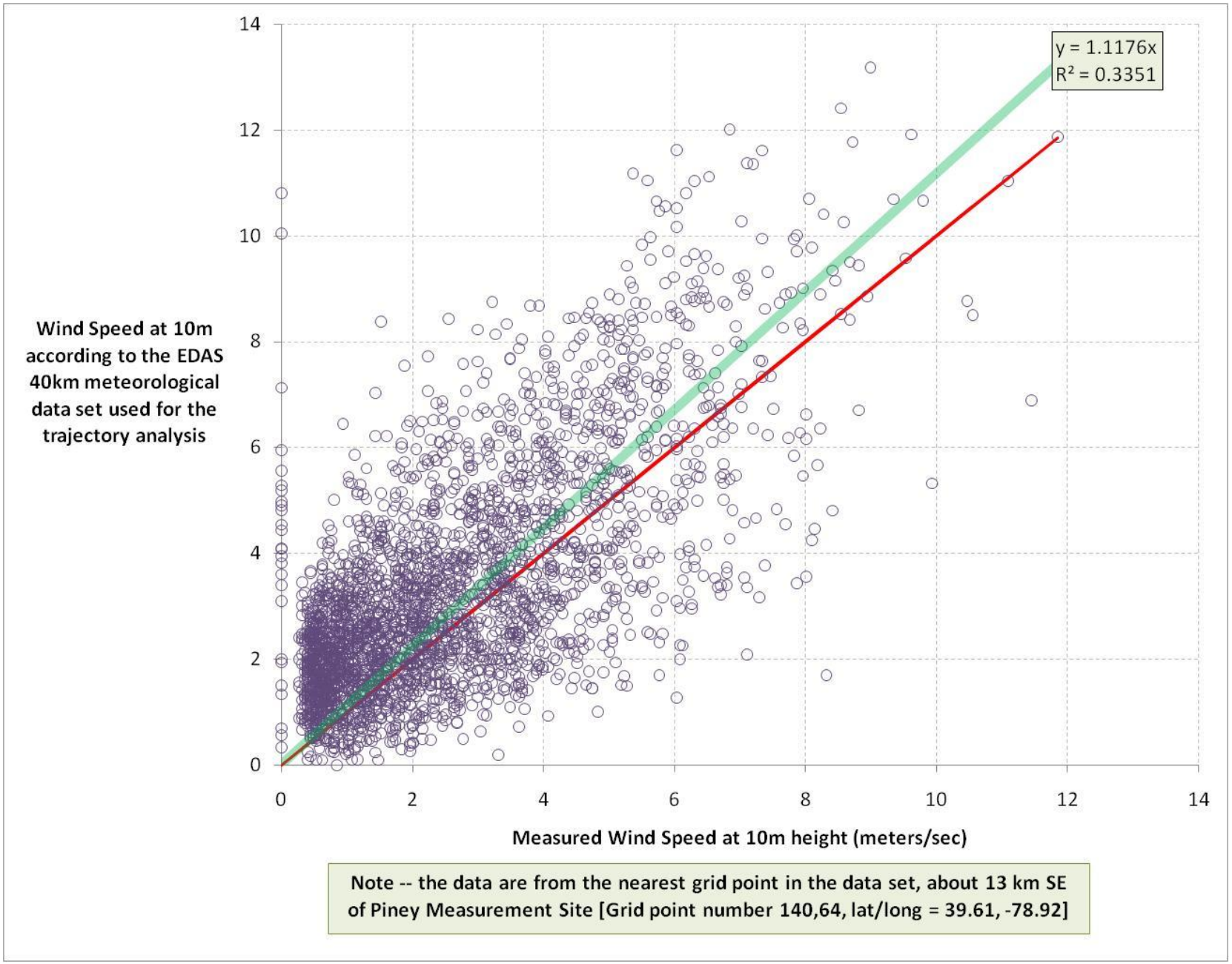
Air Emissions

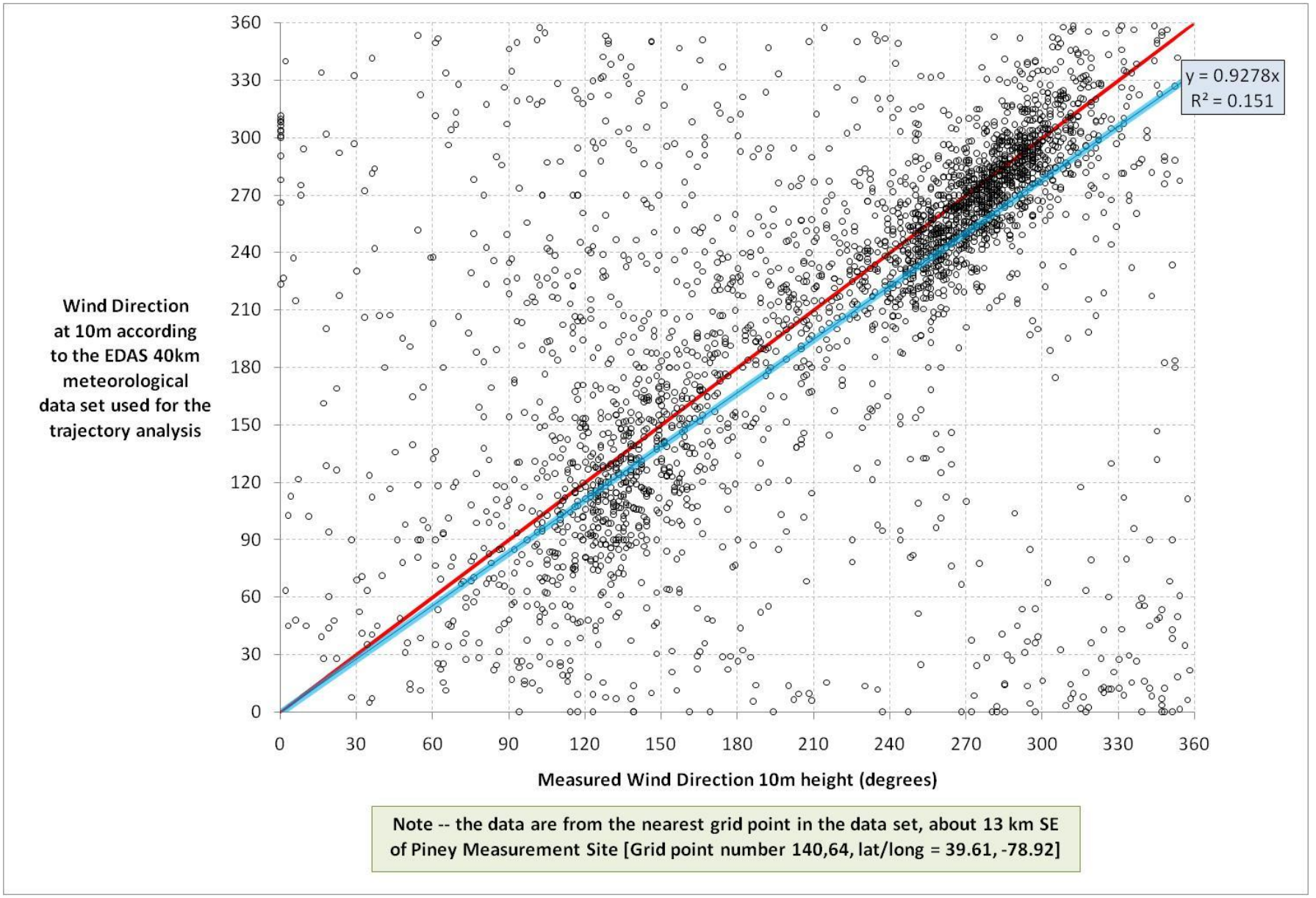
size/shape of symbol denotes amount of mercury emitted (kg/yr)

▲	5 – 10
○	10 – 50
△	50 – 100
□	100 – 300
◯	300 – 500
⬠	500 – 1000
⬡	1000 – 3500

color of symbol denotes type of mercury source

- coal-fired power plants
- other fuel combustion
- waste incineration
- metallurgical
- manufacturing & other


Wind Speed at 10m according to the EDAS 40km meteorological data set used for the trajectory analysis
y = 1.1176x
R² = 0.3351
0
2
4
6
8
10
12
14
Measured Wind Speed at 10m height (meters/sec)
Note -- the data are from the nearest grid point in the data set, about 13 km SE of Piney Measurement Site [Grid point number 140,64, lat/long = 39.61, -78.92]

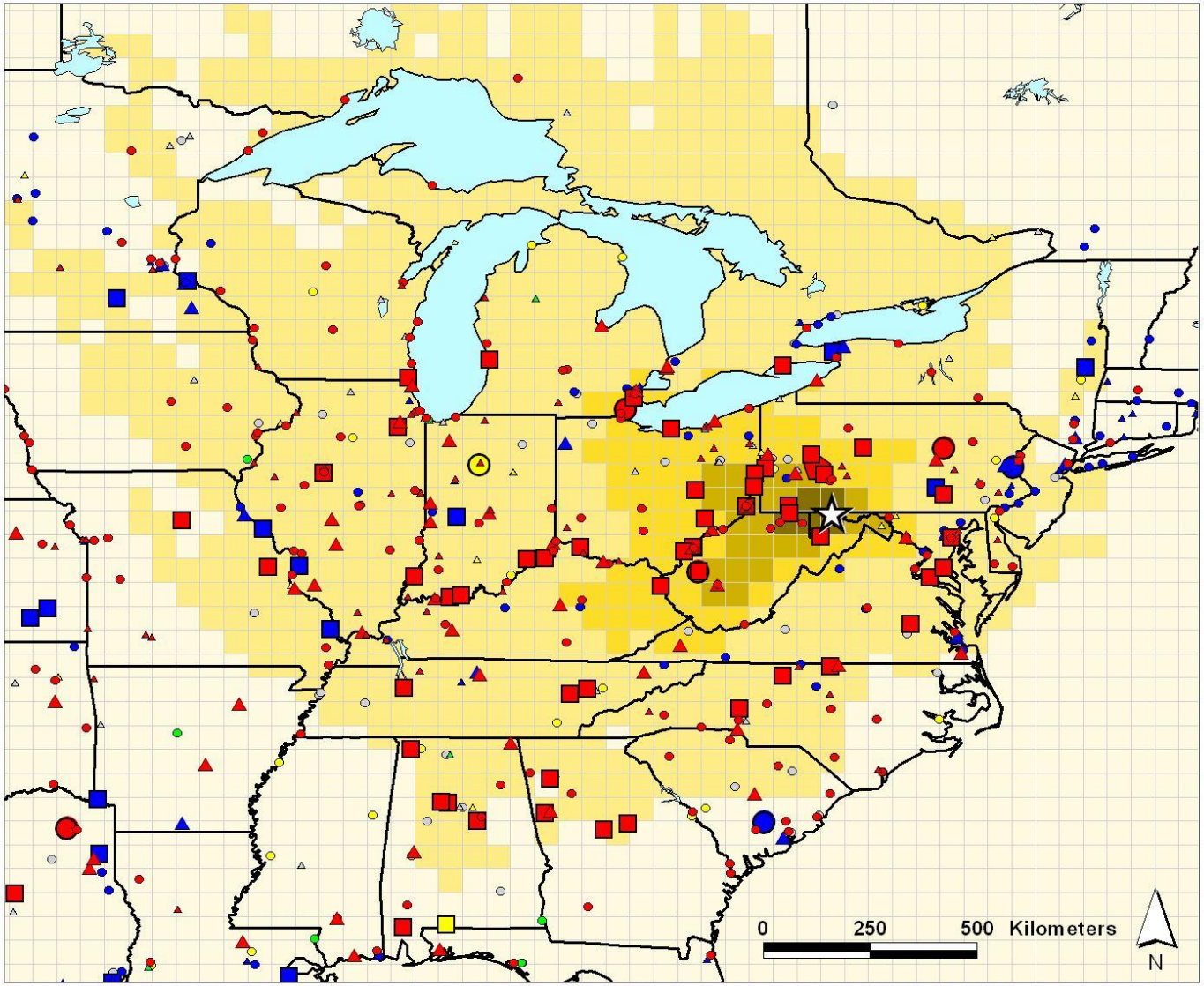

Wind Direction at 10m according to the EDAS 40km meteorological data set used for the trajectory analysis
360
330
300
270
240
210
180
150
120
90
60
30
0
0
30
60
90
120
150
180
210
240
270
300
330
360
y = 0.9278x
R² = 0.151
Measured Wind Direction 10m height (degrees)
Note -- the data are from the nearest grid point in the data set, about 13 km SE of Piney Measurement Site [Grid point number 140,64, lat/long = 39.61, -78.92]

Trajectory Endpoint Frequency Graphics

0.5 degree lat/long grid

Starting height for all trajectories in this group
= ½ planetary boundary layer height

Spatial distribution of hourly trajectory endpoint frequencies
Entire year, Starting Height = ½ Planetary Boundary Layer
with estimated 2002 emissions of reactive gaseous mercury



0.5 degree lat/long grid

☆ **Piney Measurement Site**

Percent of back-trajectories passing through grid square

- 0 - 1
- 1- 5
- 5 - 10
- 10 - 25
- 25 - 100

Air Emissions

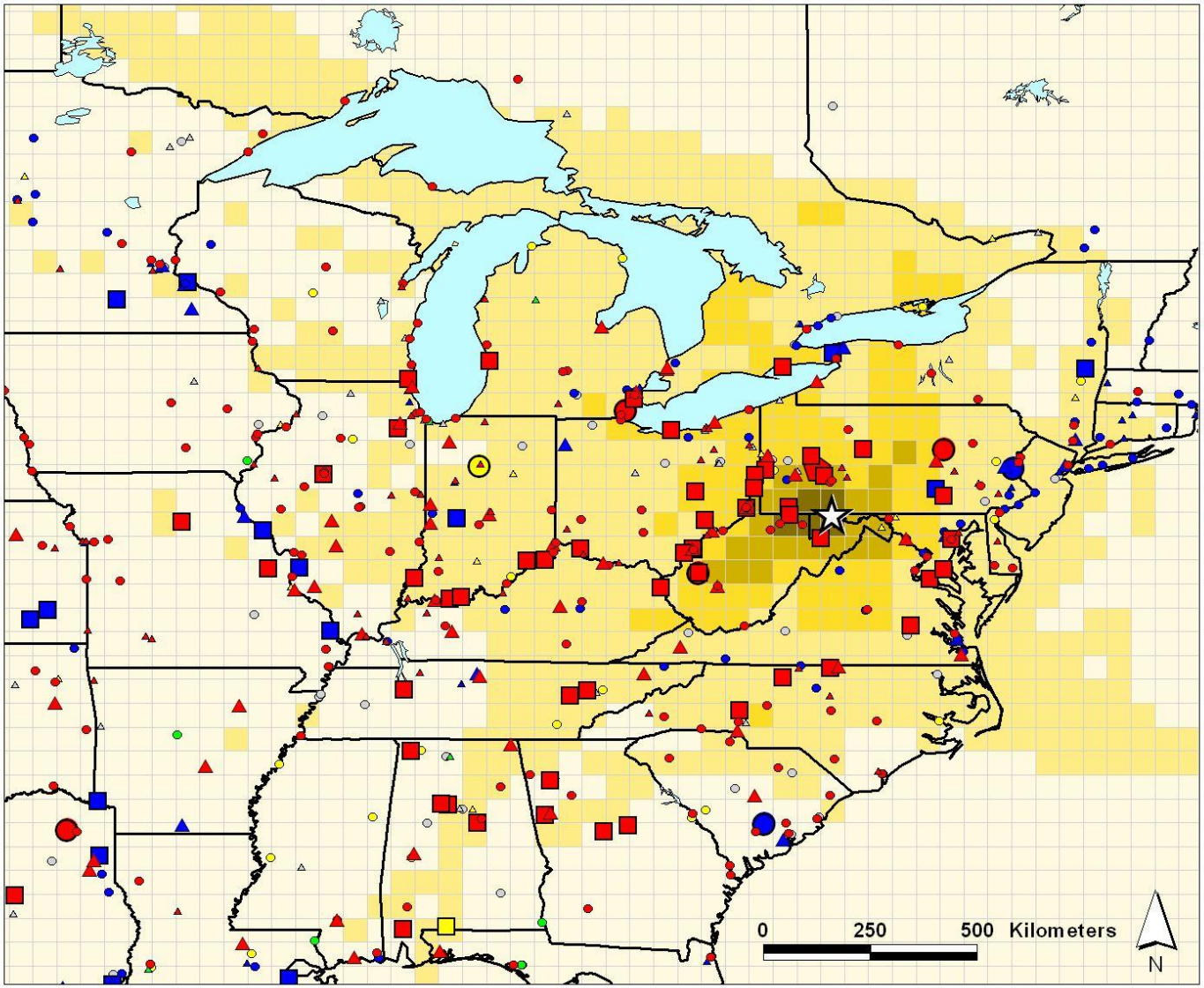
size/shape of symbol denotes amount of mercury emitted (kg/yr)

- 5 – 10
- 10 – 50
- 50 – 100
- 100 – 300
- 300 – 500
- 500 – 1000
- 1000 – 3500

color of symbol denotes type of mercury source

- coal-fired power plants
- other fuel combustion
- waste incineration
- metallurgical
- manufacturing & other

Spatial distribution of hourly trajectory endpoint frequencies
Summer, Starting Height = ½ Planetary Boundary Layer
with estimated 2002 emissions of reactive gaseous mercury



0.5 degree lat/long grid

☆ **Piney Measurement Site**

Percent of back-trajectories passing through grid square

- 0 - 1
- 1- 5
- 5 - 10
- 10 - 25
- 25 - 100

Air Emissions

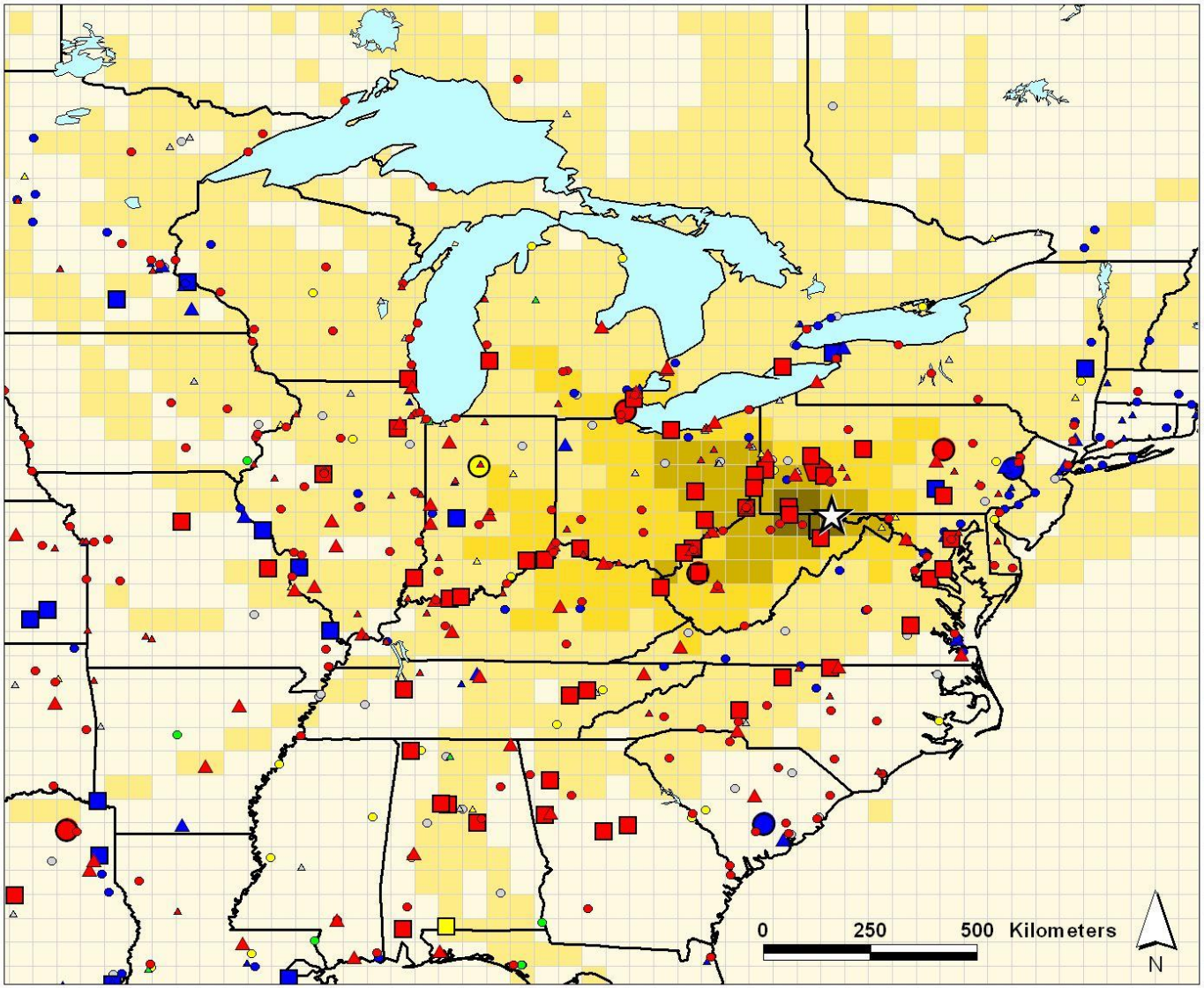
size/shape of symbol denotes amount of mercury emitted (kg/yr)

- △ 5 – 10
- ○ 10 – 50
- △ 50 – 100
- □ 100 – 300
- ○ 300 – 500
- ⬠ 500 – 1000
- ⬡ 1000 – 3500

color of symbol denotes type of mercury source

- coal-fired power plants
- other fuel combustion
- waste incineration
- metallurgical
- manufacturing & other

Spatial distribution of hourly trajectory endpoint frequencies
Fall, Starting Height = ½ Planetary Boundary Layer
with estimated 2002 emissions of reactive gaseous mercury



0.5 degree lat/long grid

☆ **Piney Measurement Site**

Percent of back-trajectories passing through grid square

- 0 - 1
- 1- 5
- 5 - 10
- 10 - 25
- 25 - 100

Air Emissions

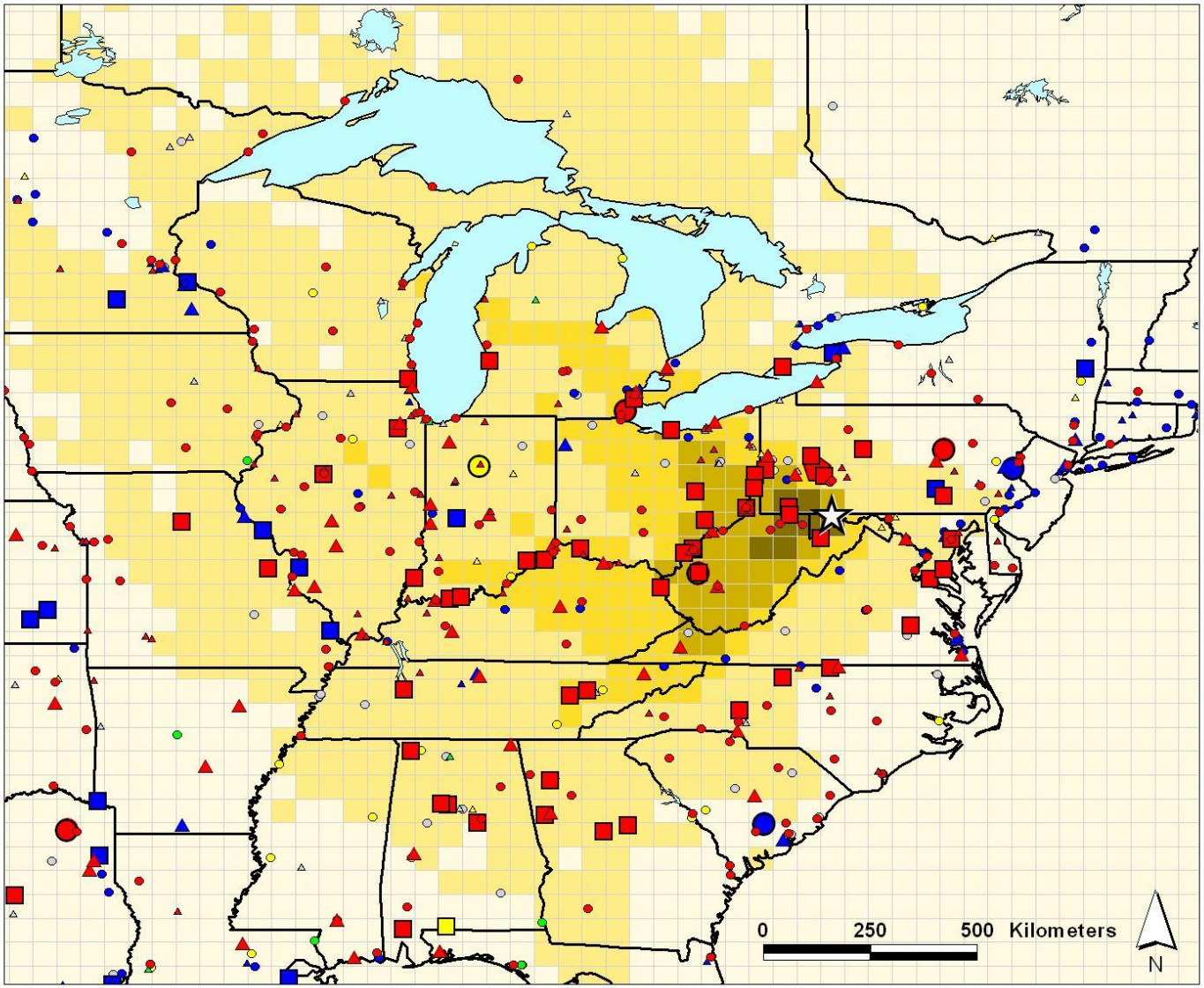
size/shape of symbol denotes amount of mercury emitted (kg/yr)

- △ 5 – 10
- ○ 10 – 50
- △ 50 – 100
- □ 100 – 300
- ○ 300 – 500
- ⬠ 500 – 1000
- ⬡ 1000 – 3500

color of symbol denotes type of mercury source

- coal-fired power plants
- other fuel combustion
- waste incineration
- metallurgical
- manufacturing & other

Spatial distribution of hourly trajectory endpoint frequencies
Winter, Starting Height = ½ Planetary Boundary Layer
with estimated 2002 emissions of reactive gaseous mercury



0.5 degree lat/long grid

☆ **Piney Measurement Site**

Percent of back-trajectories passing through grid square

- 0 - 1
- 1- 5
- 5 - 10
- 10 - 25
- 25 - 100

Air Emissions

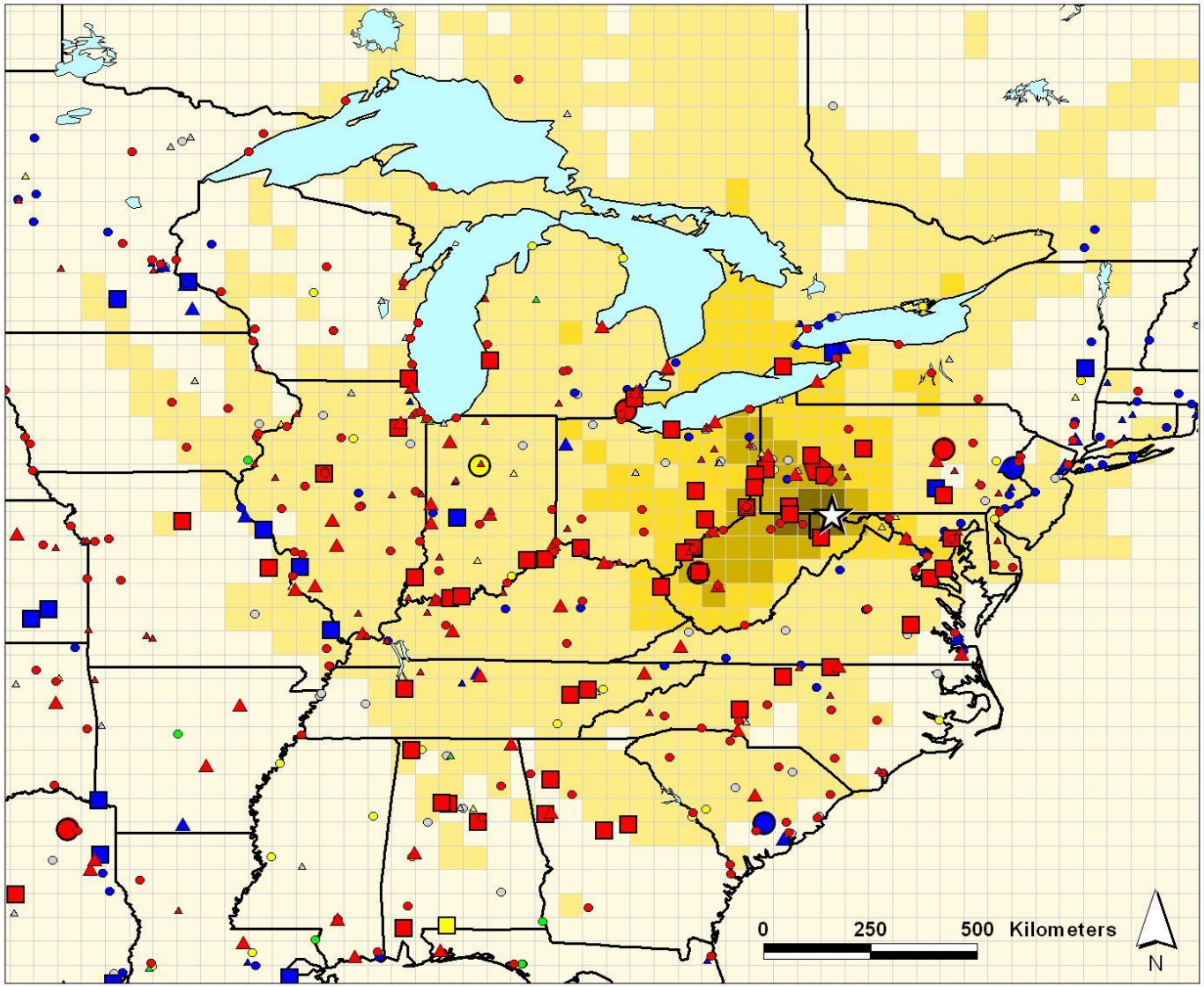
size/shape of symbol denotes amount of mercury emitted (kg/yr)

- △ 5 – 10
- ○ 10 – 50
- △ 50 – 100
- □ 100 – 300
- ○ 300 – 500
- ⬠ 500 – 1000
- ⬡ 1000 – 3500

color of symbol denotes type of mercury source

- coal-fired power plants
- other fuel combustion
- waste incineration
- metallurgical
- manufacturing & other

Spatial distribution of hourly trajectory endpoint frequencies
Spring, Starting Height = ½ Planetary Boundary Layer
with estimated 2002 emissions of reactive gaseous mercury



0.5 degree lat/long grid

☆ **Piney Measurement Site**

Percent of back-trajectories passing through grid square

- 0 - 1
- 1- 5
- 5 - 10
- 10 - 25
- 25 - 100

Air Emissions

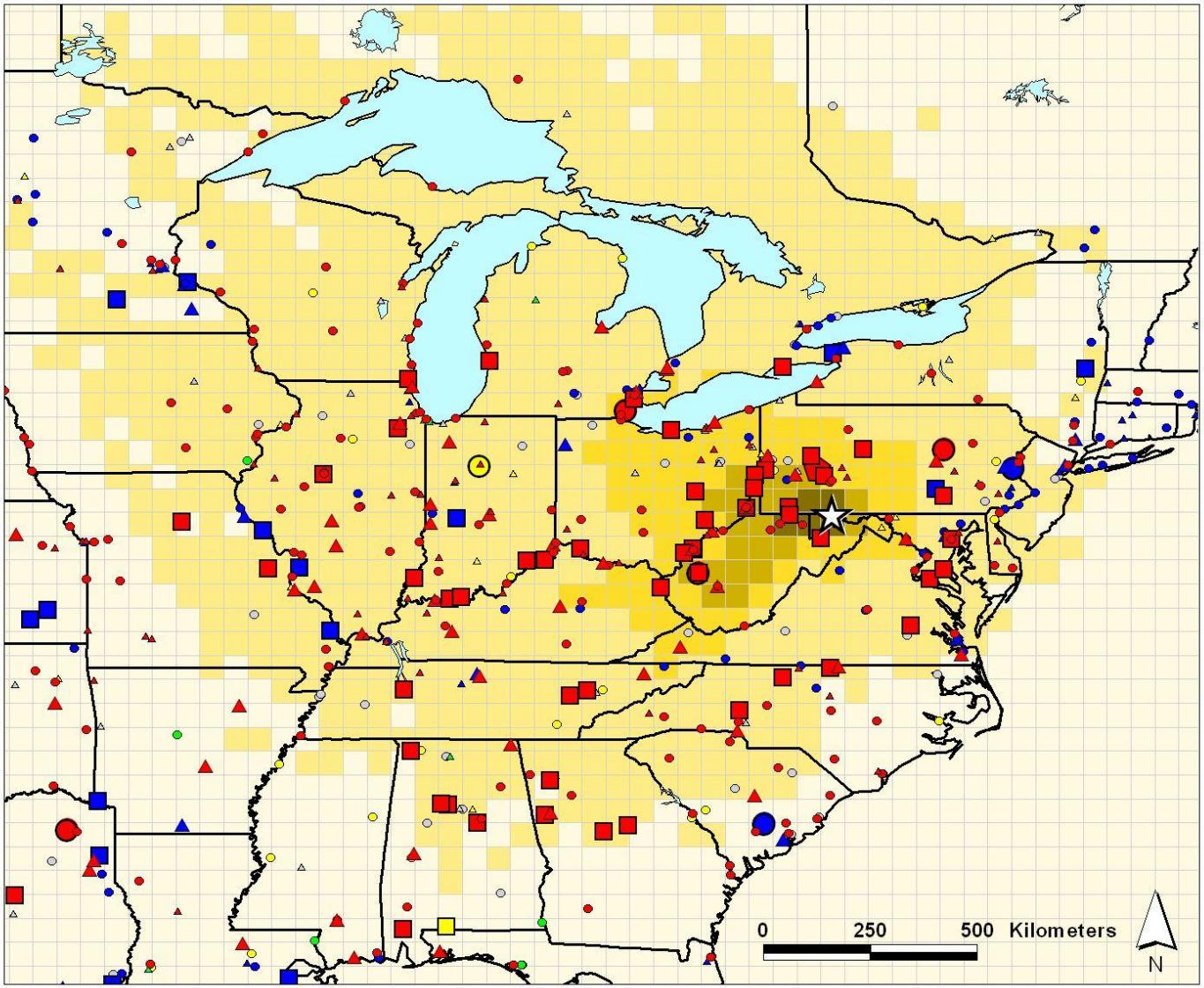
size/shape of symbol denotes amount of mercury emitted (kg/yr)

- △ 5 – 10
- ○ 10 – 50
- △ 50 – 100
- □ 100 – 300
- ○ 300 – 500
- ⬠ 500 – 1000
- ⬡ 1000 – 3500

color of symbol denotes type of mercury source

- coal-fired power plants
- other fuel combustion
- waste incineration
- metallurgical
- manufacturing & other

Spatial distribution of hourly trajectory endpoint frequencies
Day (8 AM to 6 PM), Starting Height = ½ Planetary Boundary Layer
with estimated 2002 emissions of reactive gaseous mercury



0.5 degree lat/long grid

☆ **Piney Measurement Site**

Percent of back-trajectories passing through grid square

0 - 1	10 - 25
1- 5	25 - 100
5 - 10	

Air Emissions

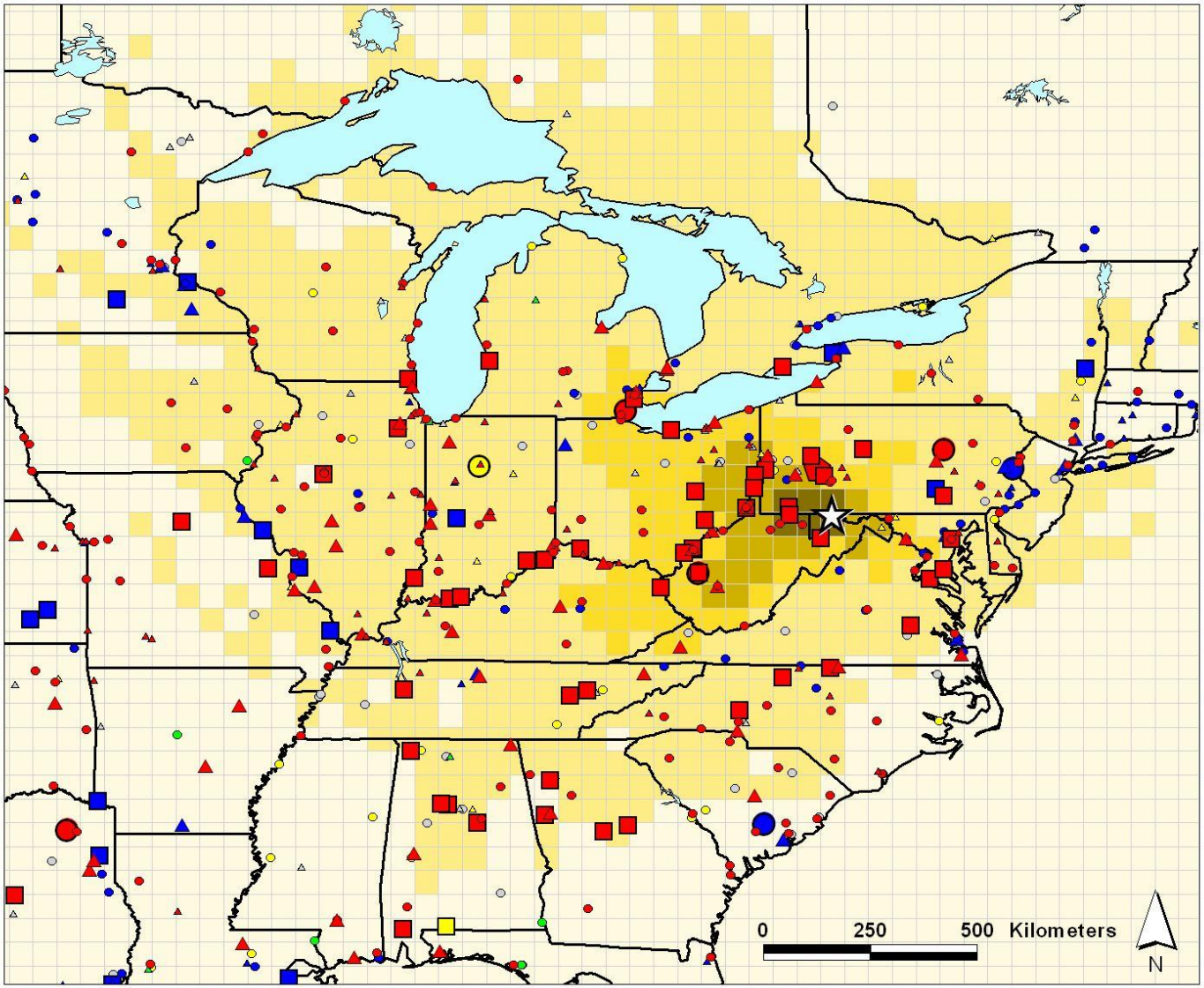
size/shape of symbol denotes amount of mercury emitted (kg/yr)

△	5 – 10
○	10 – 50
△	50 – 100
□	100 – 300
○	300 – 500
⬠	500 – 1000
⬡	1000 – 3500

color of symbol denotes type of mercury source

- coal-fired power plants
- other fuel combustion
- waste incineration
- metallurgical
- manufacturing & other

Spatial distribution of hourly trajectory endpoint frequencies
Night (7 PM to 7 AM), Starting Height = ½ Planetary Boundary Layer
with estimated 2002 emissions of reactive gaseous mercury



0.5 degree lat/long grid

☆ **Piney Measurement Site**

Percent of back-trajectories passing through grid square

0 - 1	10 - 25
1- 5	25 - 100
5 - 10	

Air Emissions

size/shape of symbol denotes amount of mercury emitted (kg/yr)

△	5 - 10
○	10 - 50
△	50 - 100
□	100 - 300
○	300 - 500
⬠	500 - 1000
⬡	1000 - 3500

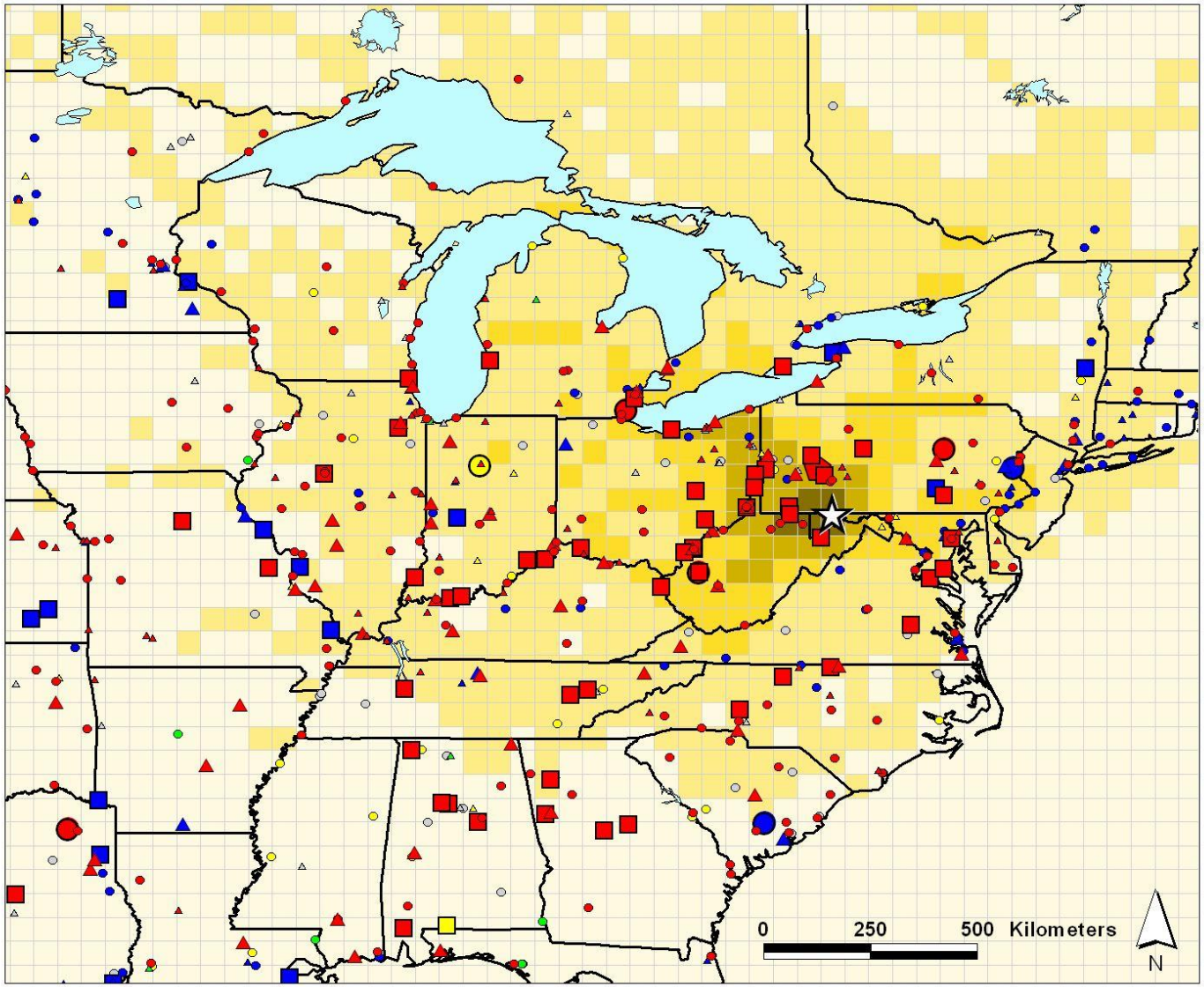
color of symbol denotes type of mercury source

- coal-fired power plants
- other fuel combustion
- waste incineration
- metallurgical
- manufacturing & other

Spatial distribution of hourly trajectory endpoint frequencies

RGM Top 10% (day and night) Starting Height = ½ Planetary Boundary Layer

with estimated 2002 emissions of reactive gaseous mercury



0.5 degree lat/long grid

☆ **Piney Measurement Site**

Percent of back-trajectories passing through grid square

- 0 - 1
- 1- 5
- 5 - 10
- 10 - 25
- 25 - 100

Air Emissions

size/shape of symbol denotes amount of mercury emitted (kg/yr)

- △ 5 – 10
- ○ 10 – 50
- △ 50 – 100
- □ 100 – 300
- ○ 300 – 500
- ⬠ 500 – 1000
- ⬡ 1000 – 3500

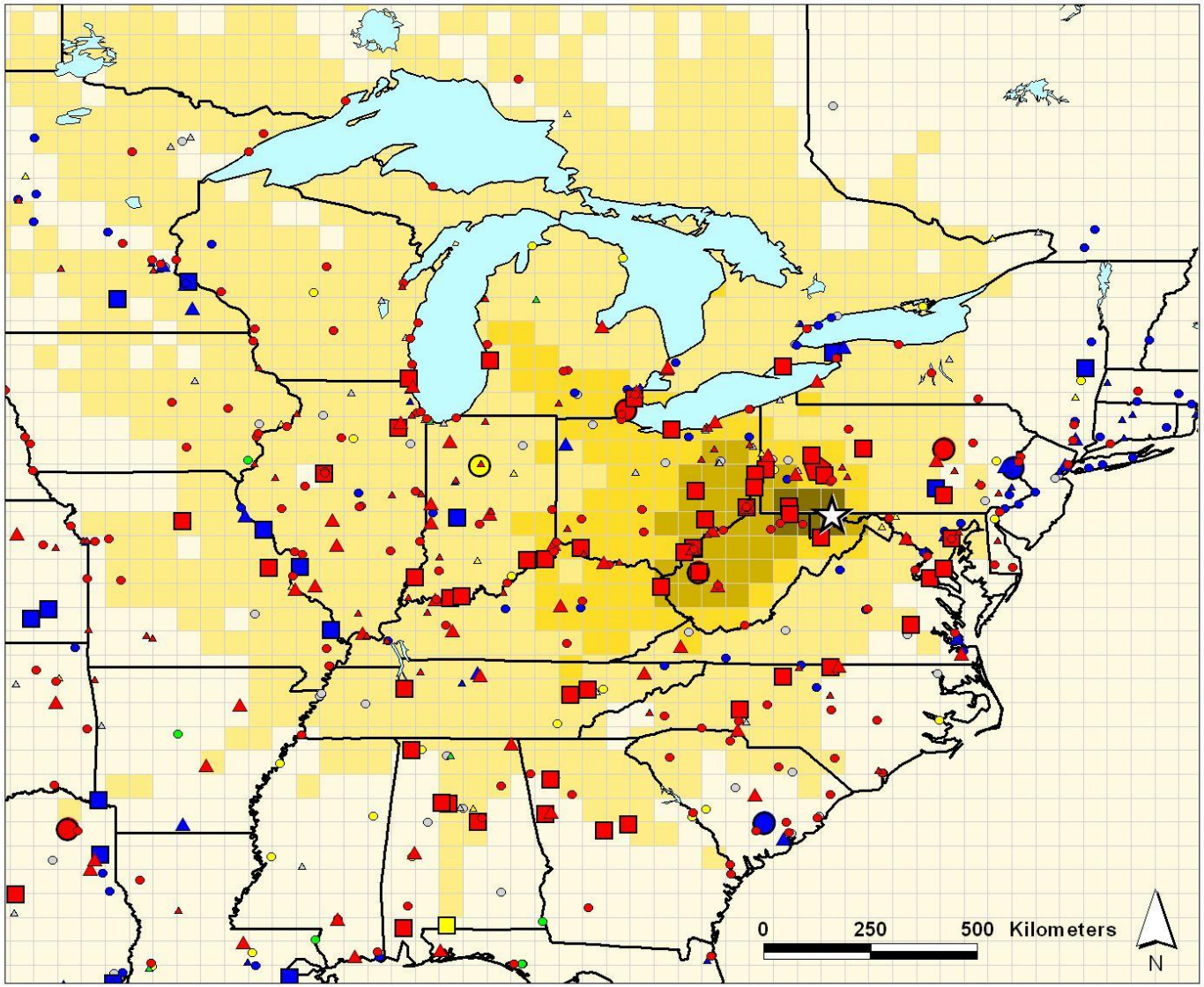
color of symbol denotes type of mercury source

- coal-fired power plants
- other fuel combustion
- waste incineration
- metallurgical
- manufacturing & other

Spatial distribution of hourly trajectory endpoint frequencies

RGM Middle 20% (day and night) Starting Height = ½ Planetary Boundary Layer

with estimated 2002 emissions of reactive gaseous mercury



0.5 degree lat/long grid

☆ **Piney Measurement Site**

Percent of back-trajectories passing through grid square

- 0 - 1
- 1- 5
- 5 - 10
- 10 - 25
- 25 - 100

Air Emissions

size/shape of symbol denotes amount of mercury emitted (kg/yr)

- 5 – 10
- 10 – 50
- 50 – 100
- 100 – 300
- 300 – 500
- 500 – 1000
- 1000 – 3500

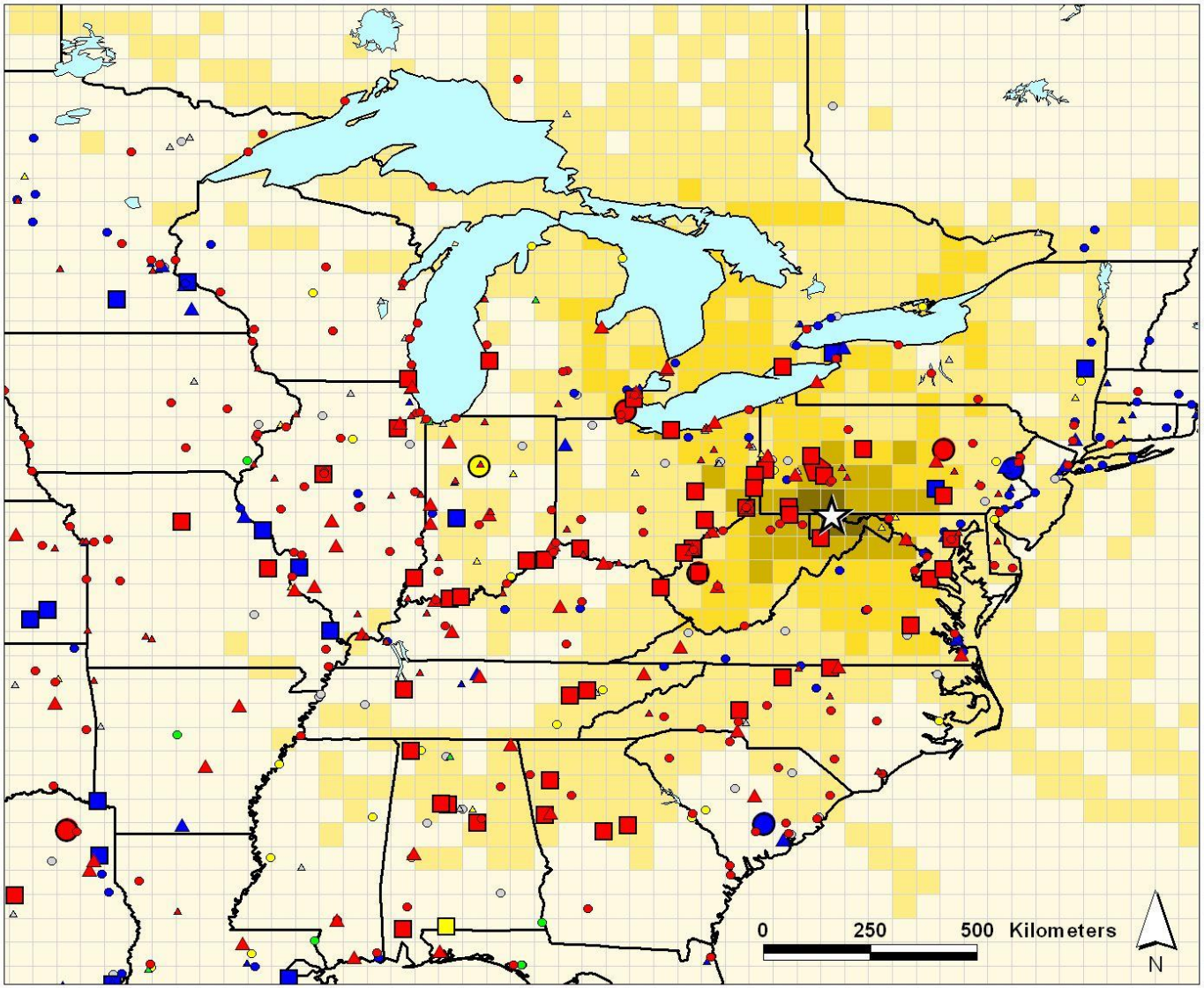
color of symbol denotes type of mercury source

- coal-fired power plants
- other fuel combustion
- waste incineration
- metallurgical
- manufacturing & other

Spatial distribution of hourly trajectory endpoint frequencies

RGM Bottom 10% (day and night) Starting Height = ½ Planetary Boundary Layer

with estimated 2002 emissions of reactive gaseous mercury



0.5 degree lat/long grid

☆ **Piney Measurement Site**

Percent of back-trajectories passing through grid square

- 0 - 1
- 1- 5
- 5 - 10
- 10 - 25
- 25 - 100

Air Emissions

size/shape of symbol denotes amount of mercury emitted (kg/yr)

- 5 – 10
- 10 – 50
- 50 – 100
- 100 – 300
- 300 – 500
- 500 – 1000
- 1000 – 3500

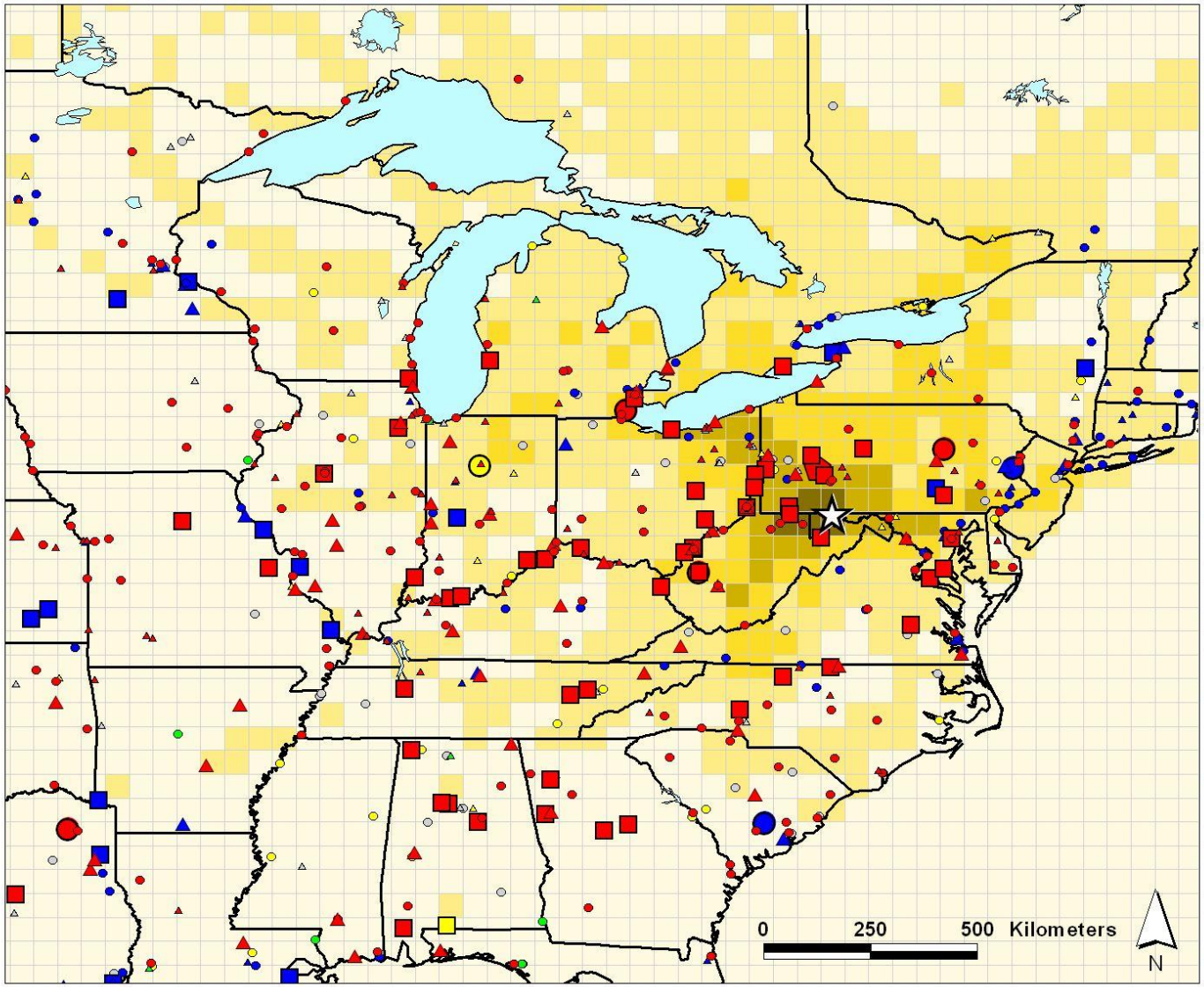
color of symbol denotes type of mercury source

- coal-fired power plants
- other fuel combustion
- waste incineration
- metallurgical
- manufacturing & other

Spatial distribution of hourly trajectory endpoint frequencies

RGM Top 10% (day 8 AM – 6 PM) Starting Height = ½ Planetary Boundary Layer

with estimated 2002 emissions of reactive gaseous mercury



0.5 degree lat/long grid

☆ **Piney Measurement Site**

Percent of back-trajectories passing through grid square

- 0 - 1
- 1- 5
- 5 - 10
- 10 - 25
- 25 - 100

Air Emissions

size/shape of symbol denotes amount of mercury emitted (kg/yr)

- △ 5 – 10
- ○ 10 – 50
- △ 50 – 100
- □ 100 – 300
- ○ 300 – 500
- ⬠ 500 – 1000
- ⬡ 1000 – 3500

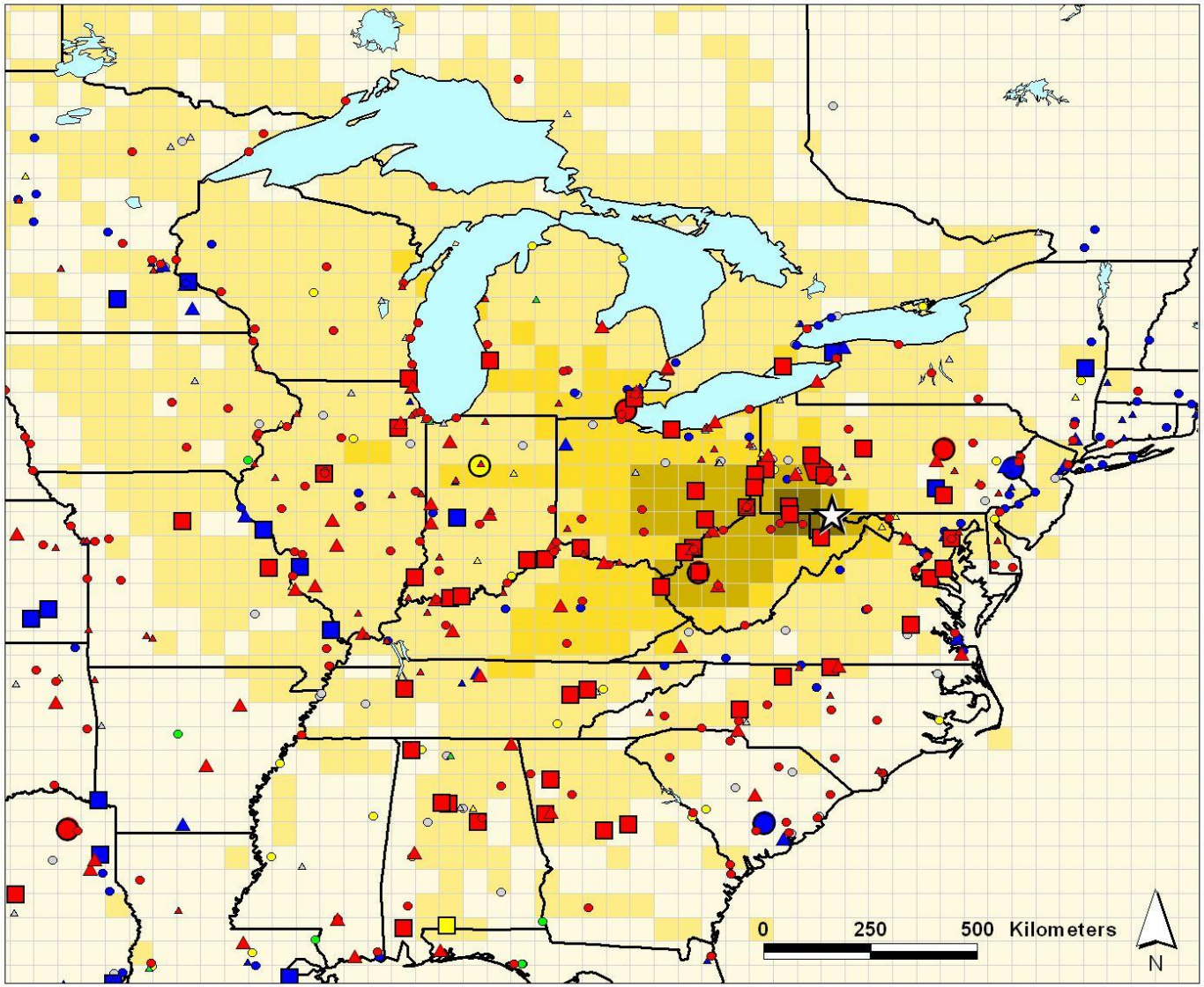
color of symbol denotes type of mercury source

- coal-fired power plants
- other fuel combustion
- waste incineration
- metallurgical
- manufacturing & other

Spatial distribution of hourly trajectory endpoint frequencies

RGM Middle 20% (day 8 AM – 6 PM) Starting Height = ½ Planetary Boundary Layer

with estimated 2002 emissions of reactive gaseous mercury



0.5 degree lat/long grid

☆ **Piney Measurement Site**

Percent of back-trajectories passing through grid square

- 0 - 1
- 1- 5
- 5 - 10
- 10 - 25
- 25 - 100

Air Emissions

size/shape of symbol denotes amount of mercury emitted (kg/yr)

- △ 5 – 10
- ○ 10 – 50
- △ 50 – 100
- □ 100 – 300
- ○ 300 – 500
- ⬠ 500 – 1000
- ⬡ 1000 – 3500

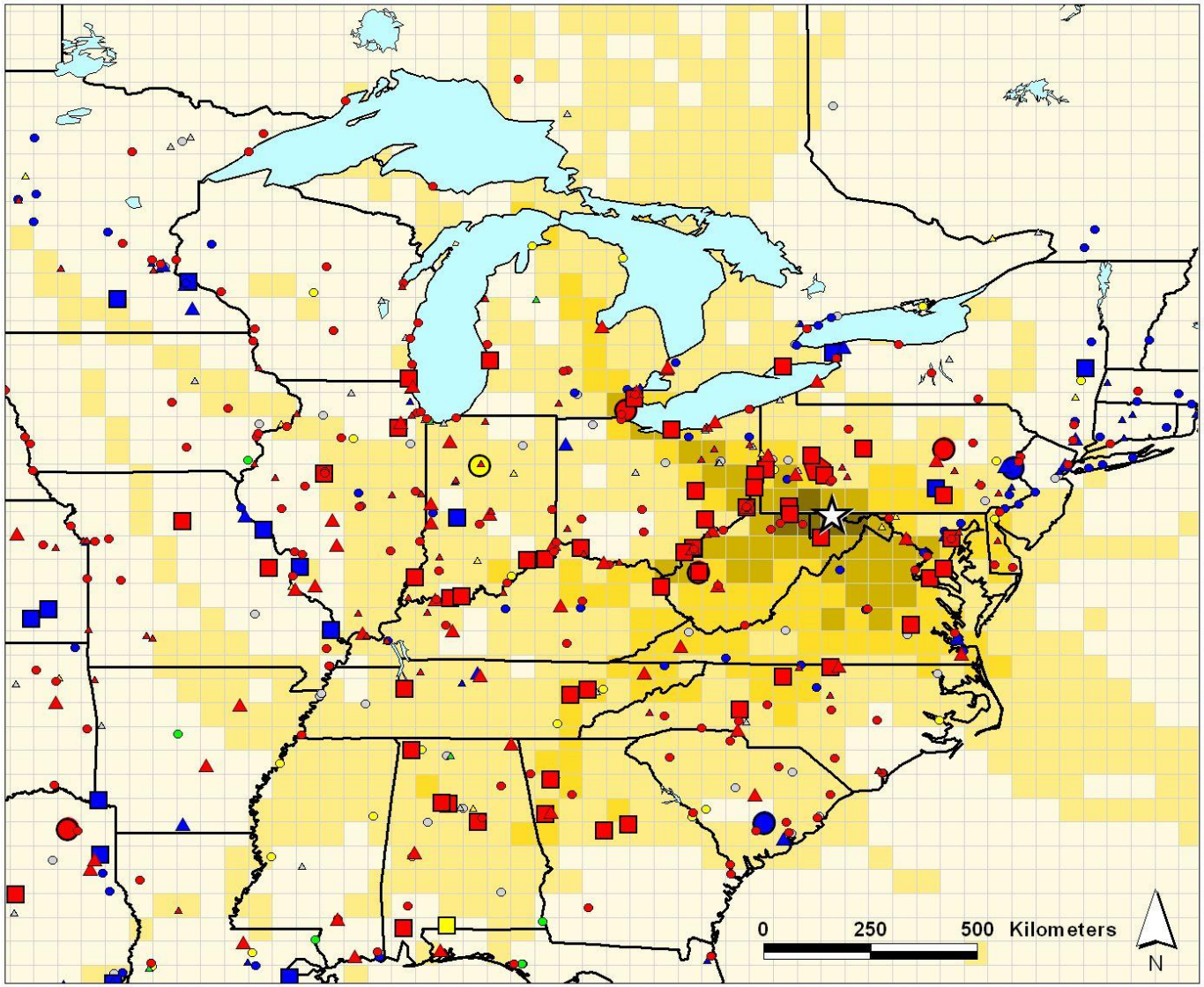
color of symbol denotes type of mercury source

- coal-fired power plants
- other fuel combustion
- waste incineration
- metallurgical
- manufacturing & other

Spatial distribution of hourly trajectory endpoint frequencies

RGM Bottom 10% (day 8 AM – 6 PM) Starting Height = ½ Planetary Boundary Layer

with estimated 2002 emissions of reactive gaseous mercury



0.5 degree lat/long grid

☆ **Piney Measurement Site**

Percent of back-trajectories passing through grid square

- 0 - 1
- 1- 5
- 5 - 10
- 10 - 25
- 25 - 100

Air Emissions

size/shape of symbol denotes amount of mercury emitted (kg/yr)

- △ 5 – 10
- ○ 10 – 50
- △ 50 – 100
- □ 100 – 300
- ○ 300 – 500
- ⬠ 500 – 1000
- ⬡ 1000 – 3500

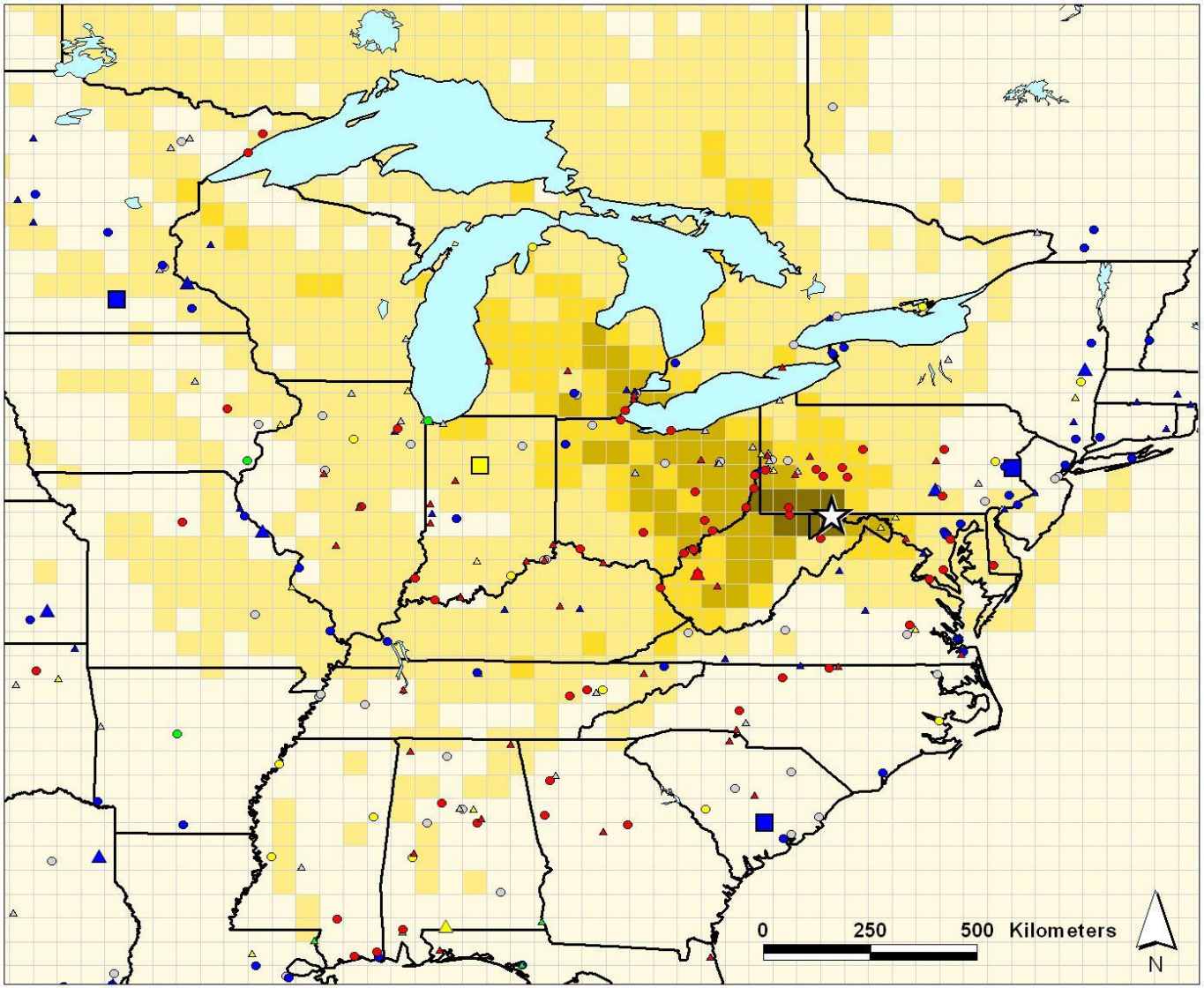
color of symbol denotes type of mercury source

- coal-fired power plants
- other fuel combustion
- waste incineration
- metallurgical
- manufacturing & other

Spatial distribution of hourly trajectory endpoint frequencies

Hg(P) Top 10% (day and night) Starting Height = ½ Planetary Boundary Layer

with estimated 2002 emissions of particulate mercury



0.5 degree lat/long grid

☆ **Piney Measurement Site**

Percent of back-trajectories passing through grid square

- 0 - 1
- 1- 5
- 5 - 10
- 10 - 25
- 25 - 100

Air Emissions

size/shape of symbol denotes amount of mercury emitted (kg/yr)

- △ 5 – 10
- ○ 10 – 50
- △ 50 – 100
- □ 100 – 300
- ○ 300 – 500
- ⬠ 500 – 1000
- ⬡ 1000 – 3500

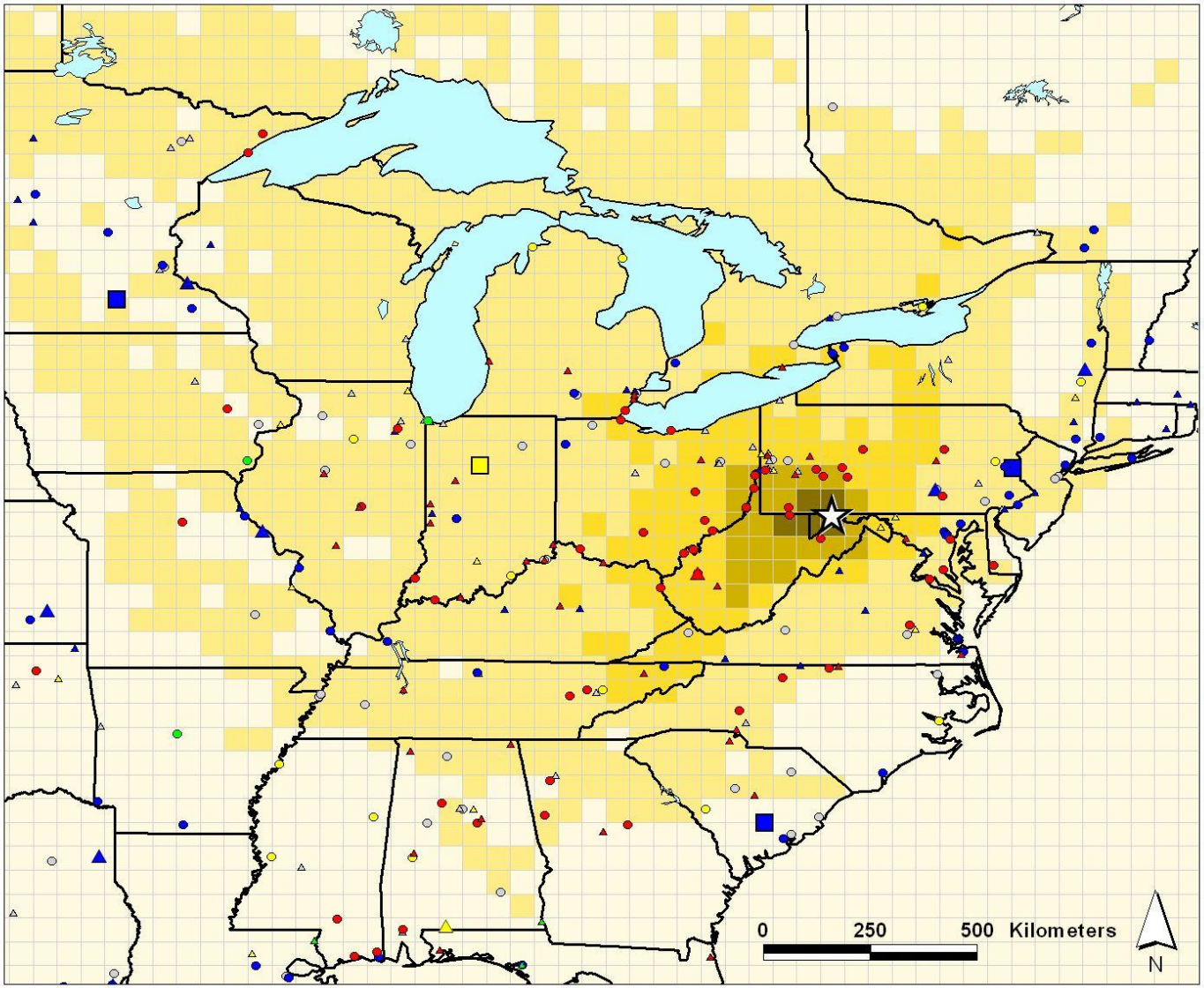
color of symbol denotes type of mercury source

- coal-fired power plants
- other fuel combustion
- waste incineration
- metallurgical
- manufacturing & other

Spatial distribution of hourly trajectory endpoint frequencies

Hg(P) Middle 20% (day and night) Starting Height = ½ Planetary Boundary Layer

with estimated 2002 emissions of particulate mercury



0.5 degree lat/long grid

☆ **Piney Measurement Site**

Percent of back-trajectories passing through grid square

- 0 - 1
- 1- 5
- 5 - 10
- 10 - 25
- 25 - 100

Air Emissions

size/shape of symbol denotes amount of mercury emitted (kg/yr)

- △ 5 – 10
- ○ 10 – 50
- △ 50 – 100
- □ 100 – 300
- ○ 300 – 500
- ⬠ 500 – 1000
- ⬡ 1000 – 3500

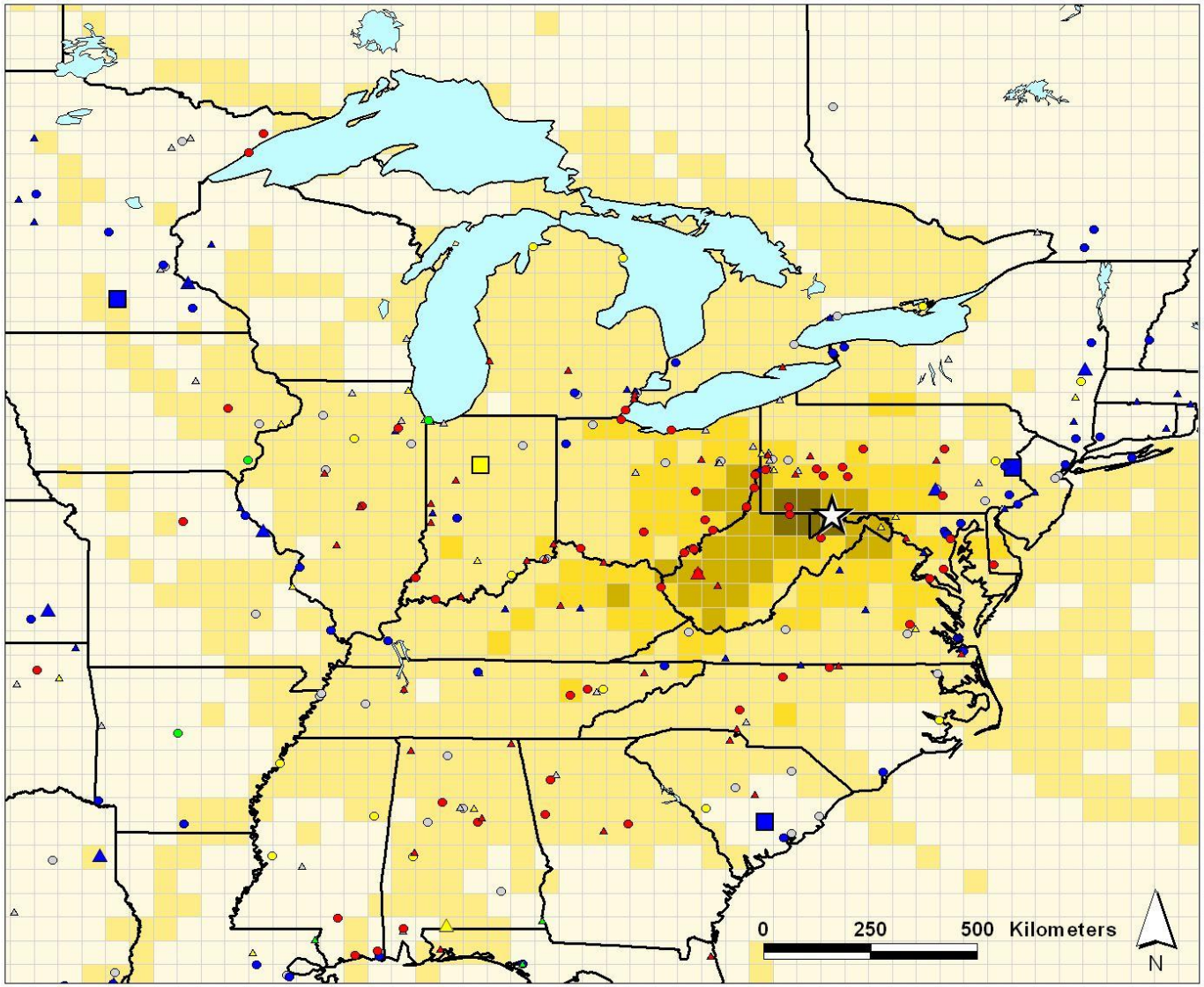
color of symbol denotes type of mercury source

- coal-fired power plants
- other fuel combustion
- waste incineration
- metallurgical
- manufacturing & other

Spatial distribution of hourly trajectory endpoint frequencies

Hg(P) Bottom 10% (day and night) Starting Height = ½ Planetary Boundary Layer

with estimated 2002 emissions of particulate mercury



0.5 degree lat/long grid

☆ **Piney Measurement Site**

Percent of back-trajectories passing through grid square

- 0 - 1
- 1- 5
- 5 - 10
- 10 - 25
- 25 - 100

Air Emissions

size/shape of symbol denotes amount of mercury emitted (kg/yr)

- △ 5 – 10
- ○ 10 – 50
- △ 50 – 100
- □ 100 – 300
- ○ 300 – 500
- ⬠ 500 – 1000
- ⬡ 1000 – 3500

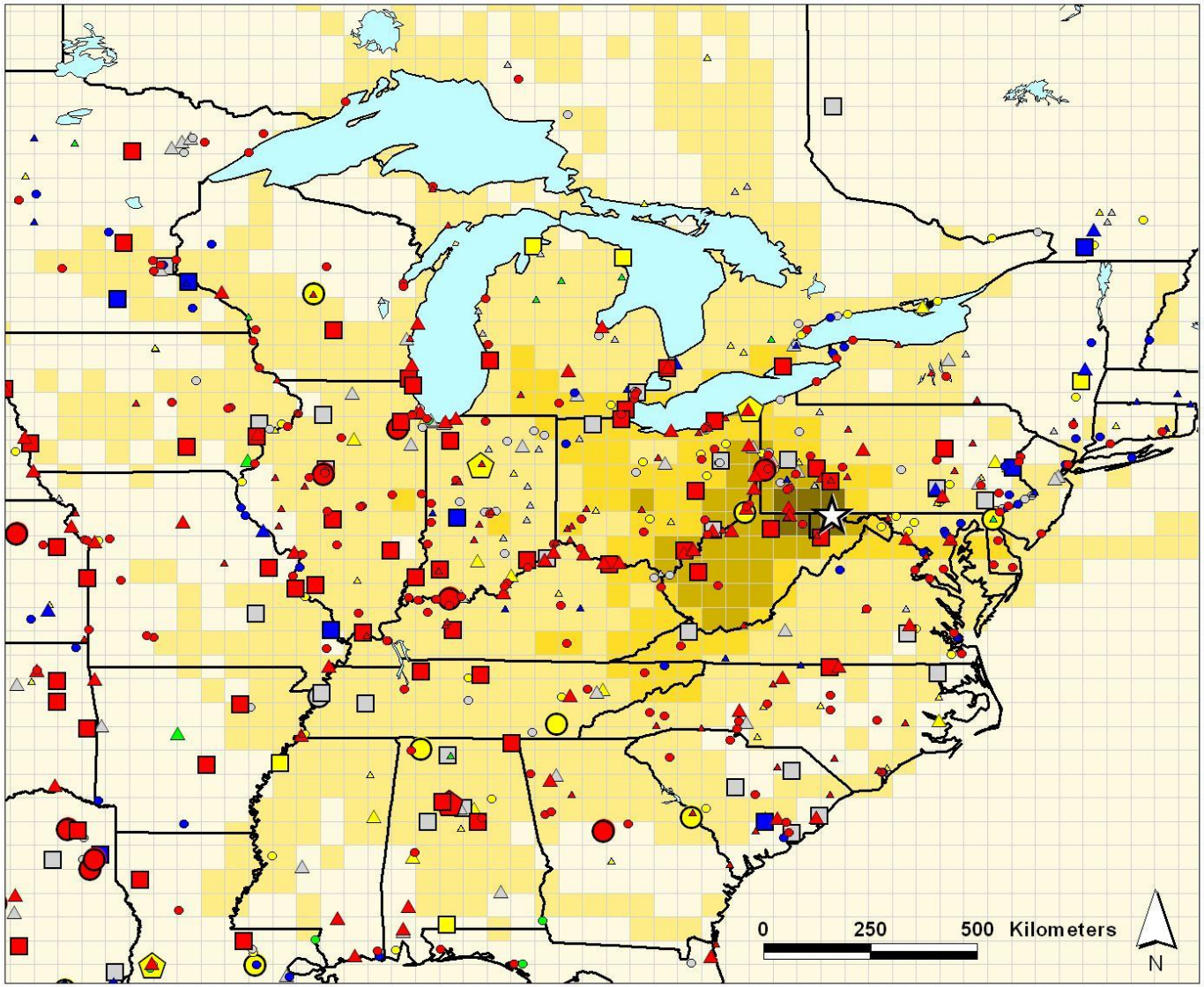
color of symbol denotes type of mercury source

- coal-fired power plants
- other fuel combustion
- waste incineration
- metallurgical
- manufacturing & other

Spatial distribution of hourly trajectory endpoint frequencies

Hg(0) Top 10% (day and night) Starting Height = ½ Planetary Boundary Layer

with estimated 2002 emissions of elemental mercury



0.5 degree lat/long grid

☆ **Piney Measurement Site**

Percent of back-trajectories passing through grid square

- 0 - 1
- 1- 5
- 5 - 10
- 10 - 25
- 25 - 100

Air Emissions

size/shape of symbol denotes amount of mercury emitted (kg/yr)

- △ 5 – 10
- ○ 10 – 50
- △ 50 – 100
- □ 100 – 300
- ○ 300 – 500
- ⬠ 500 – 1000
- ⬡ 1000 – 3500

color of symbol denotes type of mercury source

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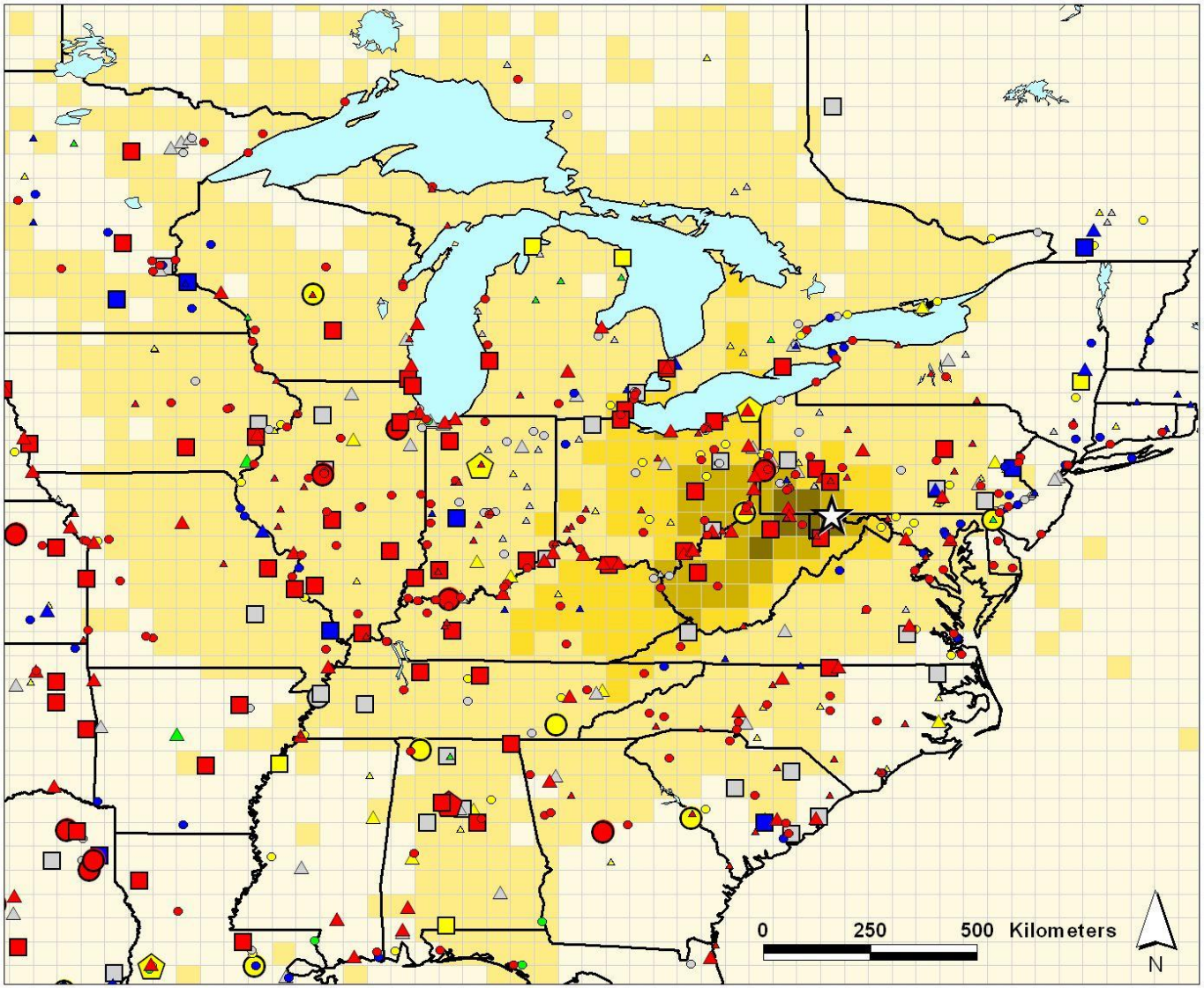
- other fuel combustion
- waste incineration
- metallurgical
- manufacturing & other

Spatial distribution of hourly trajectory endpoint frequencies

Hg(0) Middle 20% (day and night) Starting Height = ½ Planetary Boundary Layer

with estimated 2002 emissions of elemental mercury



0.5 degree lat/long grid

☆ **Piney Measurement Site**

Percent of back-trajectories passing through grid square

- 0 - 1
- 1- 5
- 5 - 10
- 10 - 25
- 25 - 100

Air Emissions

size/shape of symbol denotes amount of mercury emitted (kg/yr)

- △ 5 – 10
- ○ 10 – 50
- △ 50 – 100
- □ 100 – 300
- ○ 300 – 500
- ⬠ 500 – 1000
- ⬡ 1000 – 3500

color of symbol denotes type of mercury source

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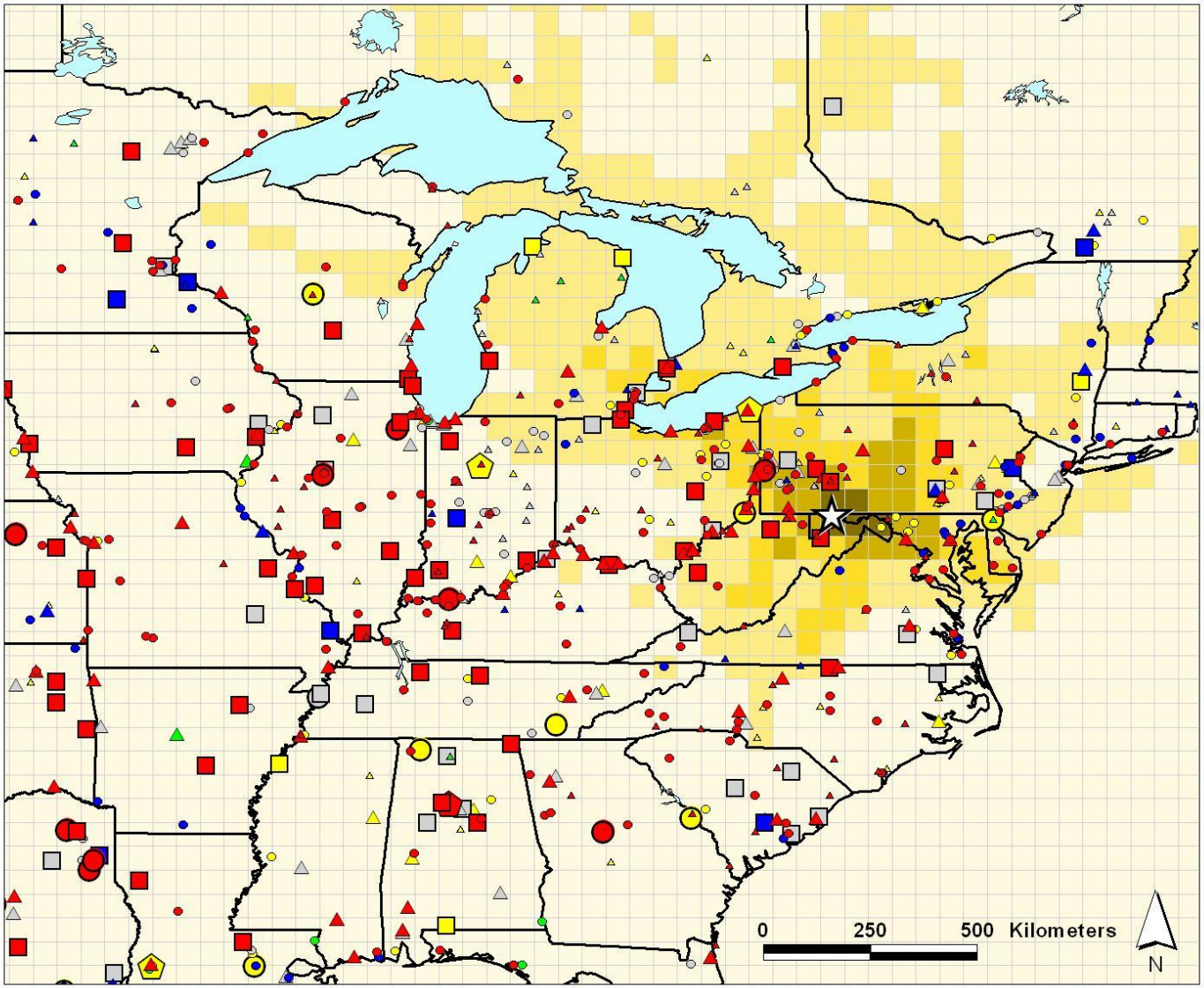
- other fuel combustion
- waste incineration
- metallurgical
- manufacturing & other

Spatial distribution of hourly trajectory endpoint frequencies

Hg(0) Bottom 10% (day and night) Starting Height = ½ Planetary Boundary Layer

with estimated 2002 emissions of elemental mercury



0.5 degree lat/long grid

☆ **Piney Measurement Site**

Percent of back-trajectories passing through grid square

- 0 - 1
- 1- 5
- 5 - 10
- 10 - 25
- 25 - 100

Air Emissions

size/shape of symbol denotes amount of mercury emitted (kg/yr)

- △ 5 – 10
- ○ 10 – 50
- △ 50 – 100
- □ 100 – 300
- ○ 300 – 500
- ⬠ 500 – 1000
- ⬡ 1000 – 3500

color of symbol denotes type of mercury source

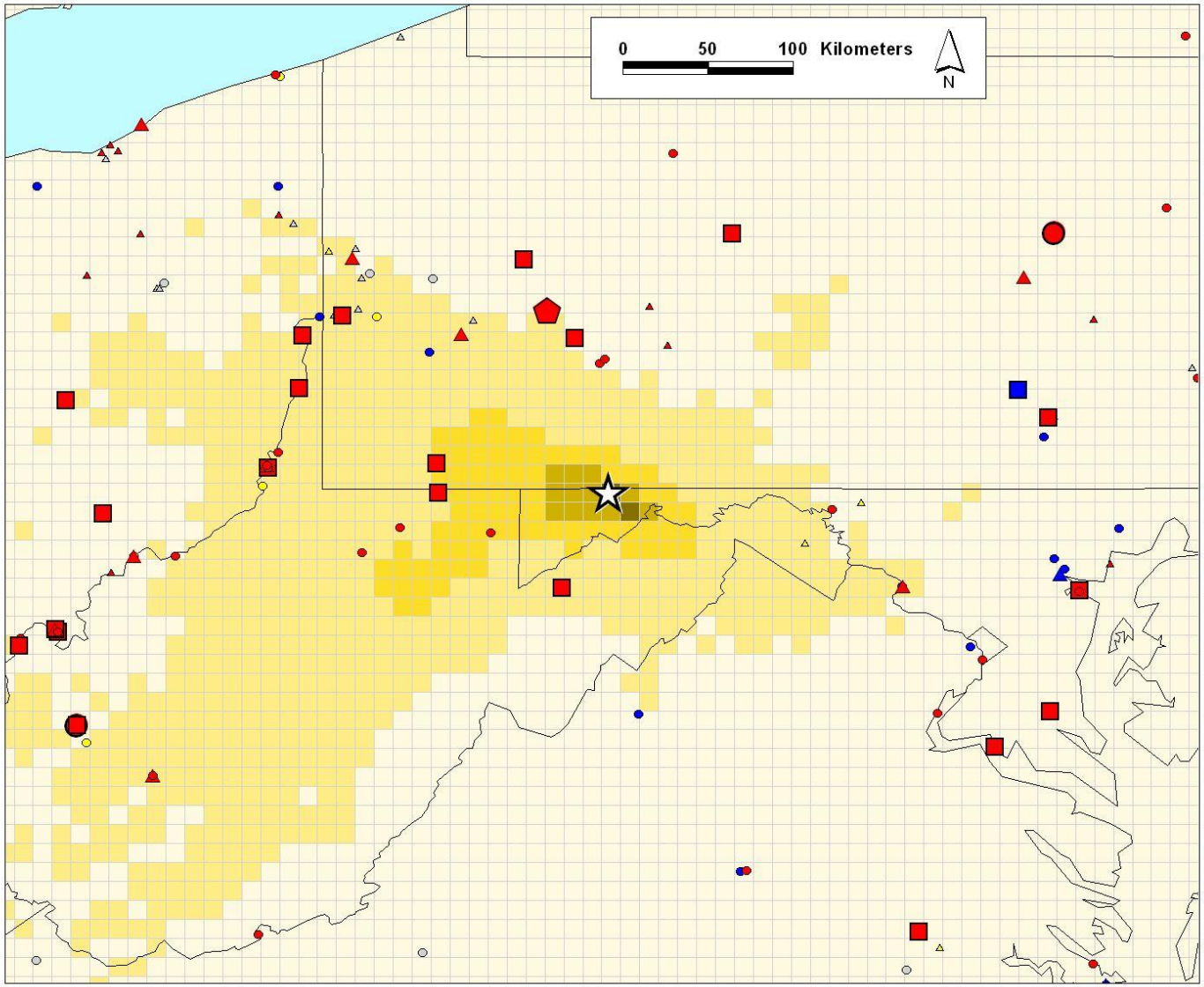
- coal-fired power plants
- other fuel combustion
- waste incineration
- metallurgical
- manufacturing & other

Trajectory Endpoint Frequency Graphics

0.1 degree lat/long regional grid

Starting height for all trajectories in this group
= ½ planetary boundary layer height

Spatial distribution of hourly trajectory endpoint frequencies
Entire year, Starting Height = ½ Planetary Boundary Layer
with estimated 2002 emissions of reactive gaseous mercury



0.1 degree lat/long regional grid

☆ **Piney Measurement Site**

Percent of back-trajectories passing through grid square

0 - 1	6 – 10
1- 3	10 - 100
3 - 6	

Air Emissions

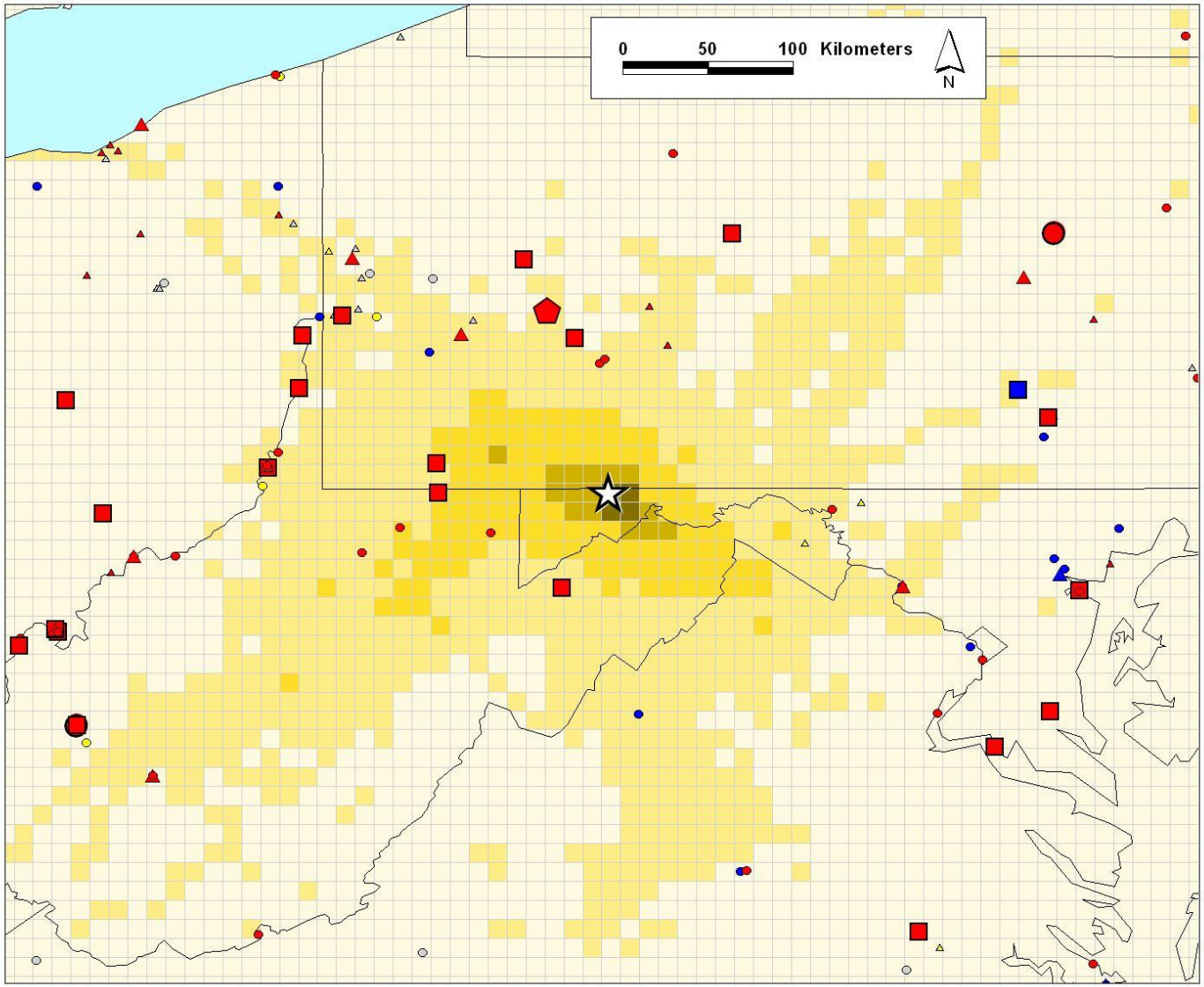
size/shape of symbol denotes amount of mercury emitted (kg/yr)

△	5 – 10
○	10 – 50
△	50 – 100
□	100 – 300
○	300 – 500
⬠	500 – 1000
⬡	1000 – 3500

color of symbol denotes type of mercury source

- coal-fired power plants
- other fuel combustion
- waste incineration
- metallurgical
- manufacturing & other

Spatial distribution of hourly trajectory endpoint frequencies
Summer, Starting Height = ½ Planetary Boundary Layer
with estimated 2002 emissions of reactive gaseous mercury



0.1 degree lat/long regional grid

☆ **Piney Measurement Site**

Percent of back-trajectories passing through grid square

0 - 1	6 – 10
1- 3	10 - 100
3 - 6	

Air Emissions

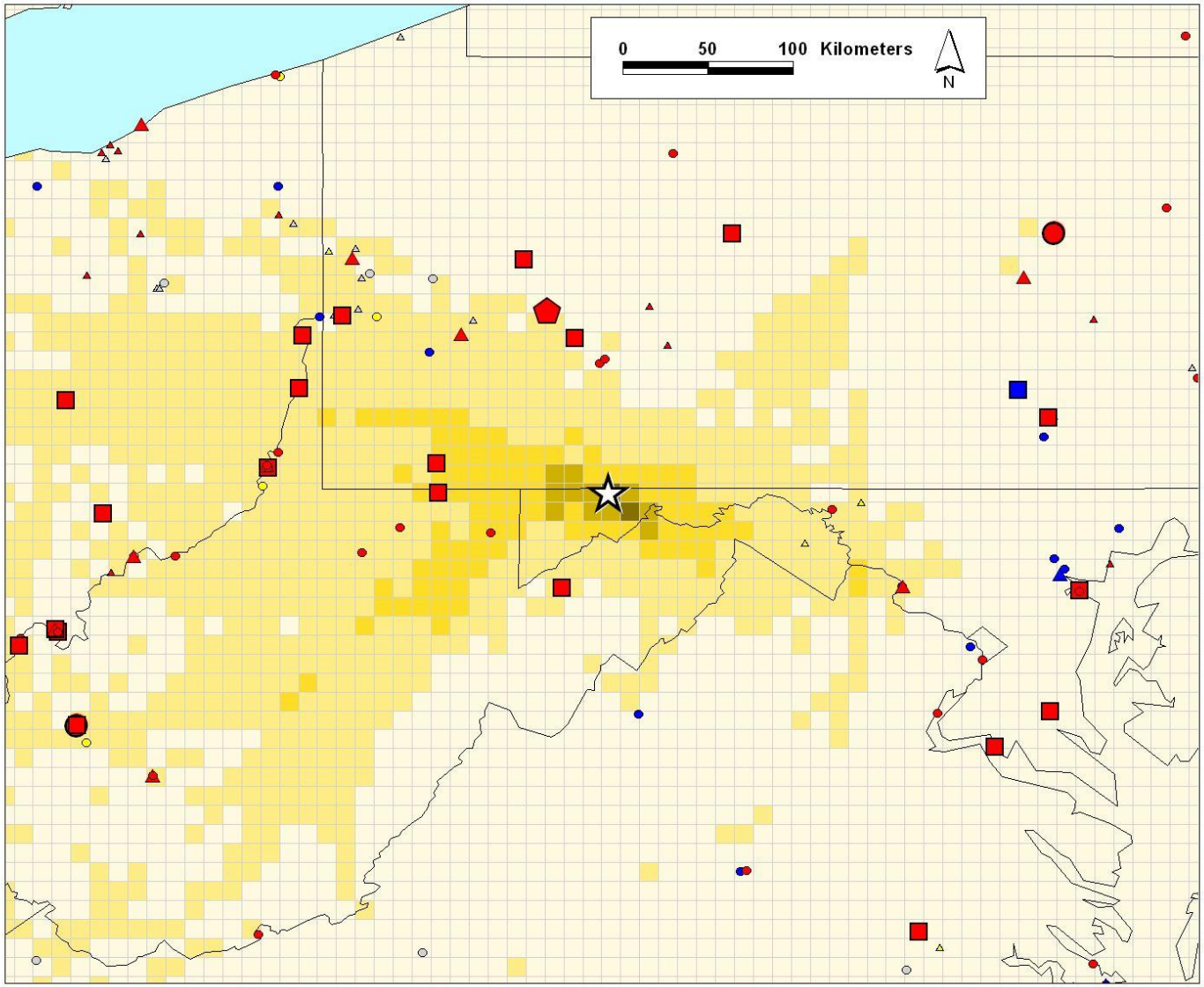
size/shape of symbol denotes amount of mercury emitted (kg/yr)

△	5 – 10
○	10 – 50
△	50 – 100
□	100 – 300
○	300 – 500
⬠	500 – 1000
⬡	1000 – 3500

color of symbol denotes type of mercury source

- coal-fired power plants
- other fuel combustion
- waste incineration
- metallurgical
- manufacturing & other

Spatial distribution of hourly trajectory endpoint frequencies
Fall, Starting Height = ½ Planetary Boundary Layer
with estimated 2002 emissions of reactive gaseous mercury



0.1 degree lat/long regional grid

☆ **Piney Measurement Site**

Percent of back-trajectories passing through grid square

0 - 1	6 – 10
1- 3	10 - 100
3 - 6	

Air Emissions

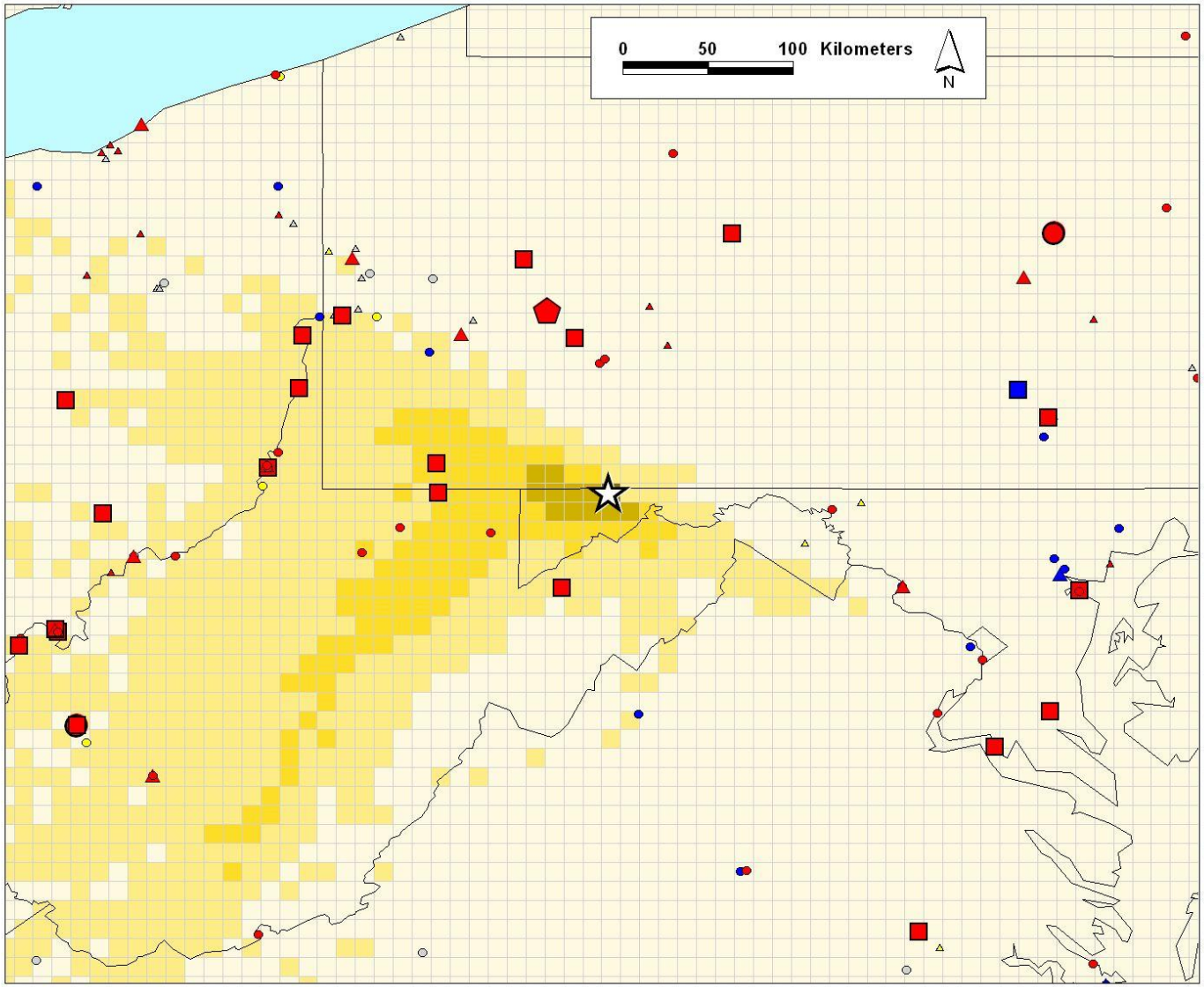
size/shape of symbol denotes amount of mercury emitted (kg/yr)

△	5 – 10
○	10 – 50
△	50 – 100
□	100 – 300
○	300 – 500
⬠	500 – 1000
⬡	1000 – 3500

color of symbol denotes type of mercury source

- coal-fired power plants
- other fuel combustion
- waste incineration
- metallurgical
- manufacturing & other

Spatial distribution of hourly trajectory endpoint frequencies
Winter, Starting Height = ½ Planetary Boundary Layer
with estimated 2002 emissions of reactive gaseous mercury



0.1 degree lat/long regional grid

☆ **Piney Measurement Site**

Percent of back-trajectories passing through grid square

0 - 1	6 – 10
1- 3	10 - 100
3 - 6	

Air Emissions

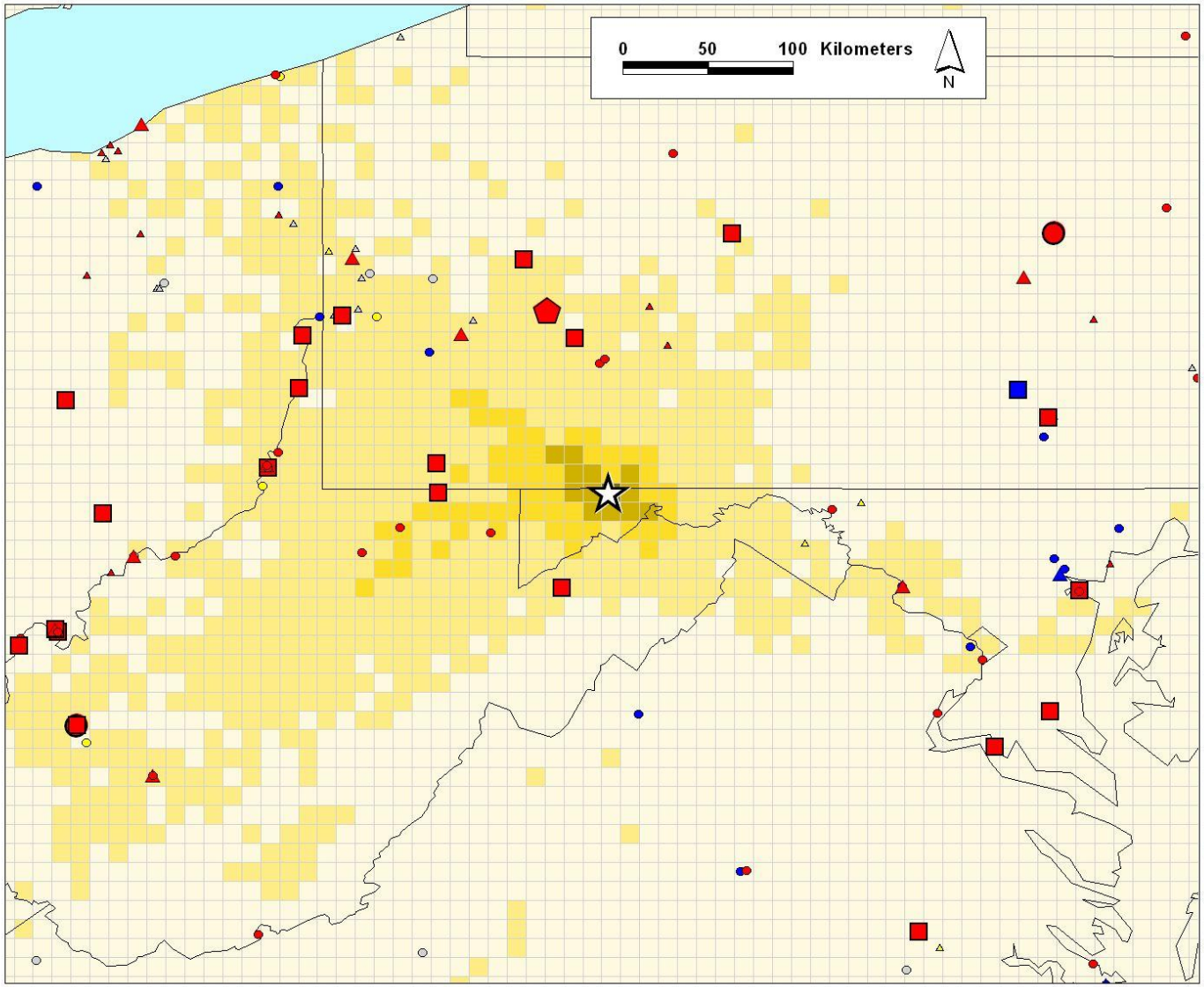
size/shape of symbol denotes amount of mercury emitted (kg/yr)

△	5 – 10
○	10 – 50
△	50 – 100
□	100 – 300
○	300 – 500
⬠	500 – 1000
⬡	1000 – 3500

color of symbol denotes type of mercury source

- coal-fired power plants
- other fuel combustion
- waste incineration
- metallurgical
- manufacturing & other

Spatial distribution of hourly trajectory endpoint frequencies
Spring, Starting Height = ½ Planetary Boundary Layer
with estimated 2002 emissions of reactive gaseous mercury



0.1 degree lat/long regional grid

☆ **Piney Measurement Site**

Percent of back-trajectories passing through grid square

0 - 1	6 – 10
1- 3	10 - 100
3 - 6	

Air Emissions

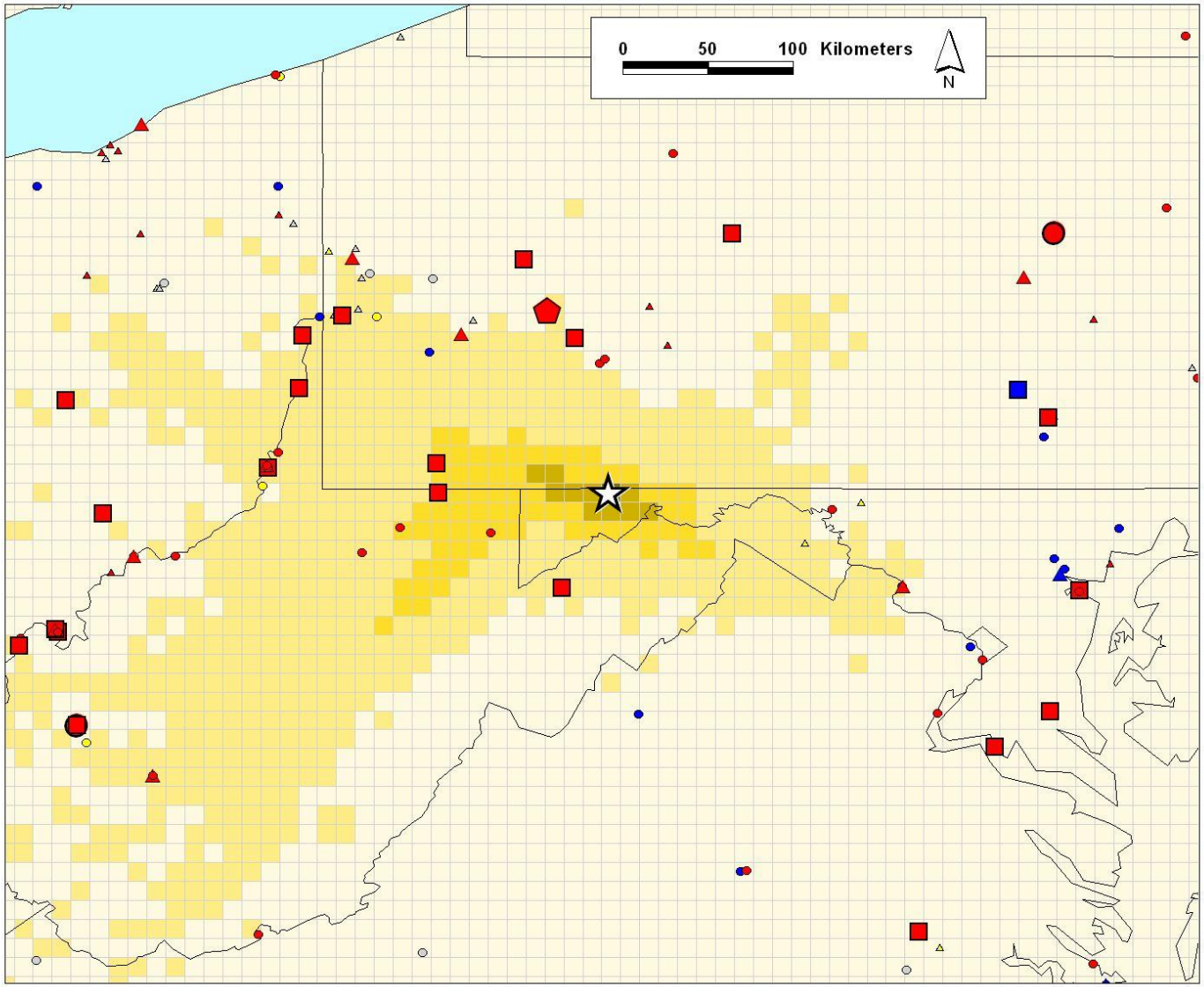
size/shape of symbol denotes amount of mercury emitted (kg/yr)

△	5 – 10
○	10 – 50
△	50 – 100
□	100 – 300
○	300 – 500
⬠	500 – 1000
⬡	1000 – 3500

color of symbol denotes type of mercury source

- coal-fired power plants
- other fuel combustion
- waste incineration
- metallurgical
- manufacturing & other

Spatial distribution of hourly trajectory endpoint frequencies
Day (8 AM to 6 PM), Starting Height = ½ Planetary Boundary Layer
with estimated 2002 emissions of reactive gaseous mercury



0.1 degree lat/long regional grid

☆ **Piney Measurement Site**

Percent of back-trajectories passing through grid square

0 - 1	6 – 10
1- 3	10 - 100
3 - 6	

Air Emissions

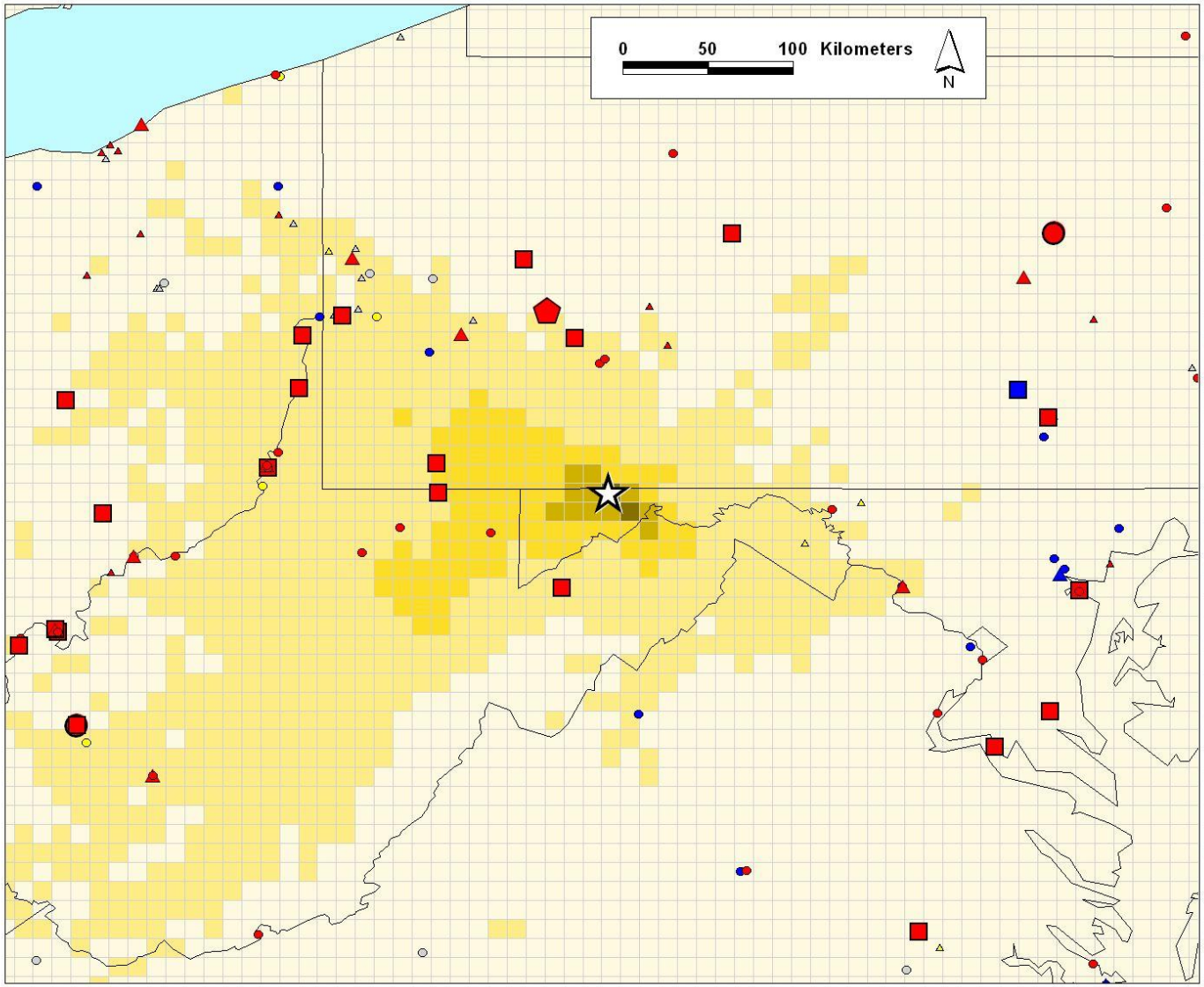
size/shape of symbol denotes amount of mercury emitted (kg/yr)

△	5 – 10
○	10 – 50
△	50 – 100
□	100 – 300
○	300 – 500
⬠	500 – 1000
⬡	1000 – 3500

color of symbol denotes type of mercury source

- coal-fired power plants
- other fuel combustion
- waste incineration
- metallurgical
- manufacturing & other

Spatial distribution of hourly trajectory endpoint frequencies
Night (7 PM to 7 AM), Starting Height = ½ Planetary Boundary Layer
with estimated 2002 emissions of reactive gaseous mercury



0.1 degree lat/long regional grid

☆ **Piney Measurement Site**

Percent of back-trajectories passing through grid square

0 - 1	6 – 10
1- 3	10 - 100
3 - 6	

Air Emissions

size/shape of symbol denotes amount of mercury emitted (kg/yr)

△	5 – 10
○	10 – 50
△	50 – 100
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○	300 – 500
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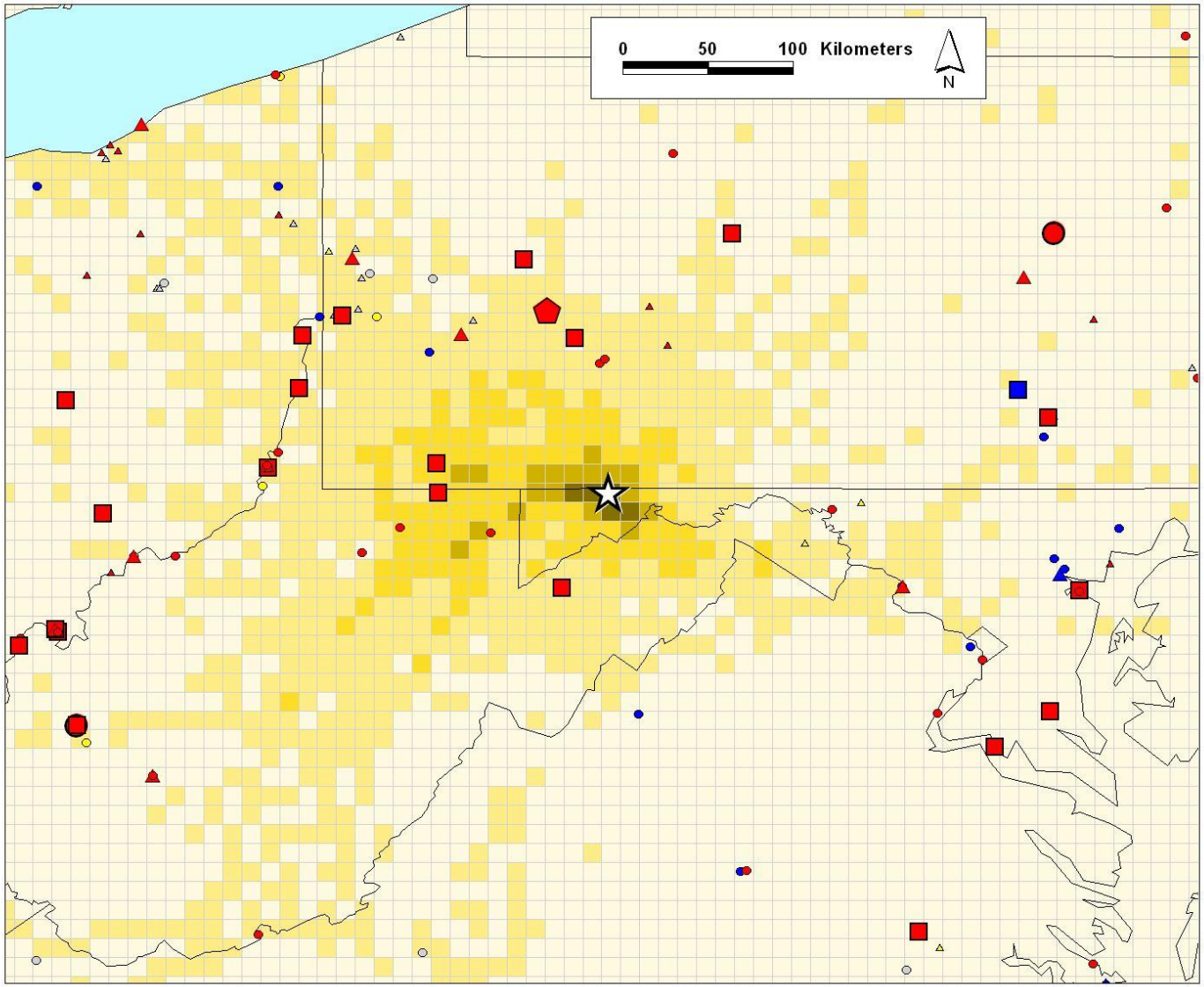
color of symbol denotes type of mercury source

- coal-fired power plants
- other fuel combustion
- waste incineration
- metallurgical
- manufacturing & other

Spatial distribution of hourly trajectory endpoint frequencies

RGM Top 10% (day and night) Starting Height = ½ Planetary Boundary Layer

with estimated 2002 emissions of reactive gaseous mercury



0.1 degree lat/long regional grid

☆ **Piney Measurement Site**

Percent of back-trajectories passing through grid square

- 0 - 1
- 1- 3
- 3 - 6
- 6 – 10
- 10 - 100

Air Emissions

size/shape of symbol denotes amount of mercury emitted (kg/yr)

△	5 – 10
○	10 – 50
△	50 – 100
□	100 – 300
○	300 – 500
⬠	500 – 1000
⬡	1000 – 3500

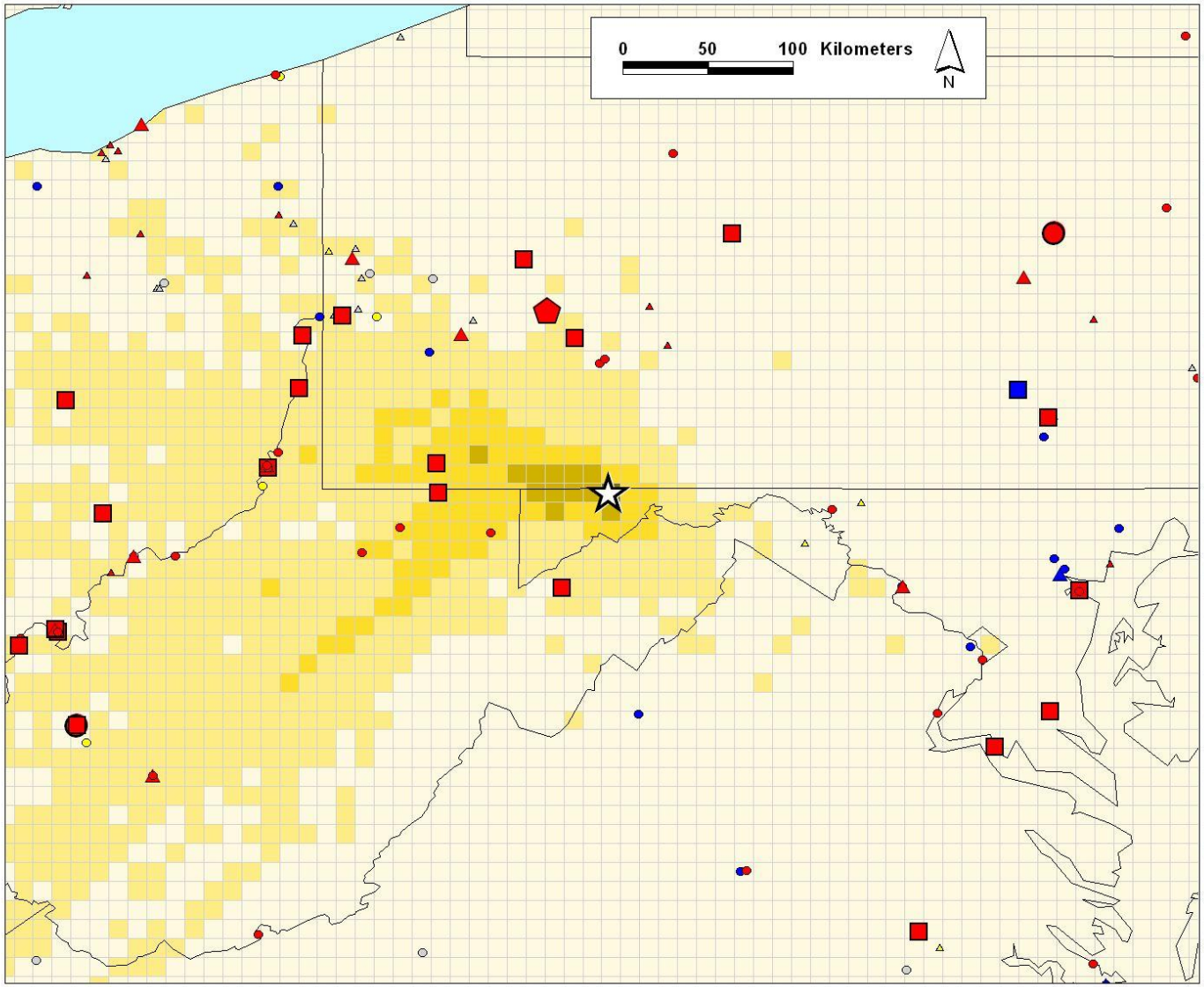
color of symbol denotes type of mercury source

- coal-fired power plants
- other fuel combustion
- waste incineration
- metallurgical
- manufacturing & other

Spatial distribution of hourly trajectory endpoint frequencies

RGM Middle 20% (day and night) Starting Height = ½ Planetary Boundary Layer

with estimated 2002 emissions of reactive gaseous mercury



0.1 degree lat/long regional grid

☆ **Piney Measurement Site**

Percent of back-trajectories passing through grid square

- 0 - 1
- 1- 3
- 3 - 6
- 6 – 10
- 10 - 100

Air Emissions

size/shape of symbol denotes amount of mercury emitted (kg/yr)

△	5 – 10
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△	50 – 100
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○	300 – 500
⬠	500 – 1000
⬡	1000 – 3500

color of symbol denotes type of mercury source

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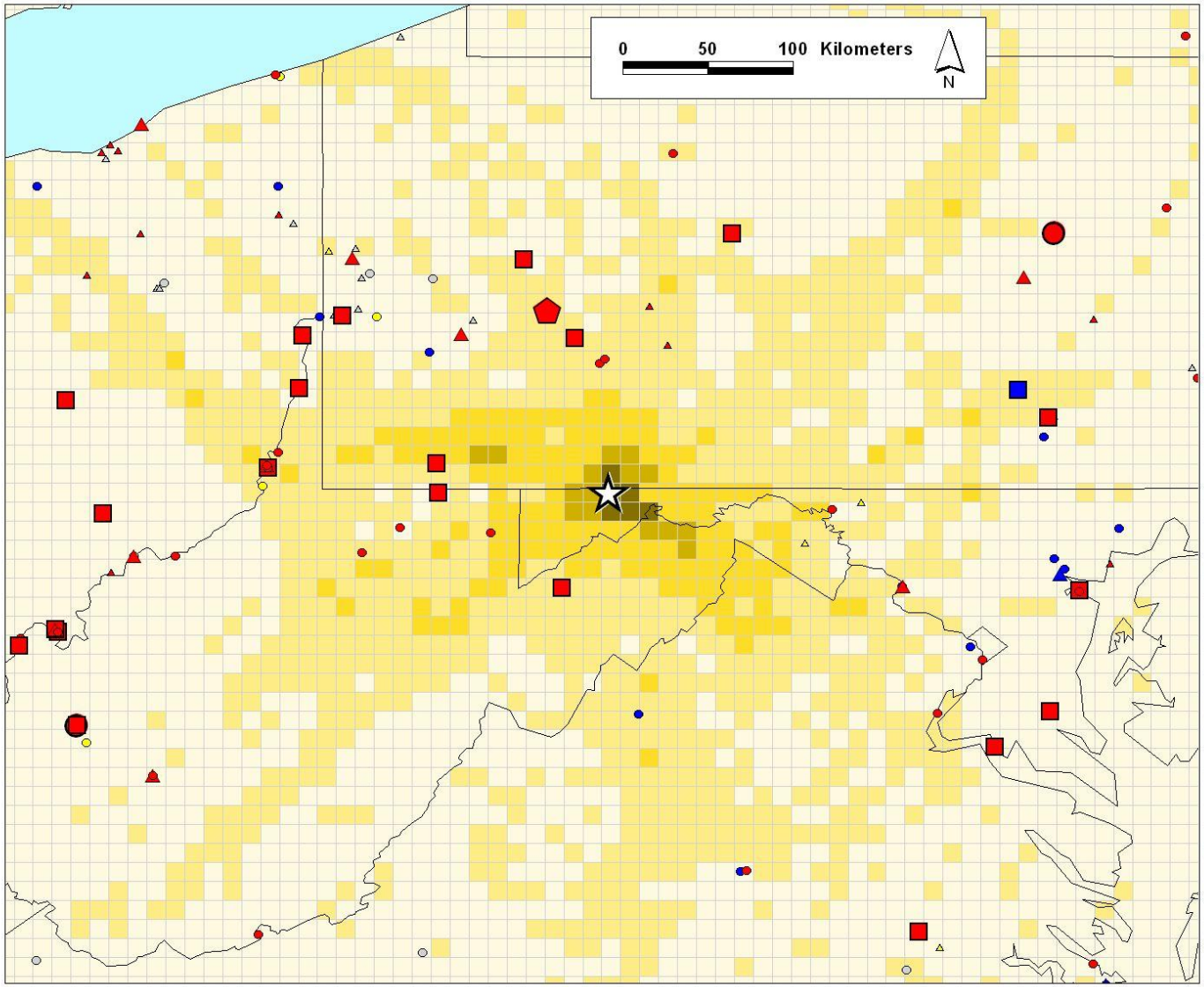
- other fuel combustion
- waste incineration
- metallurgical
- manufacturing & other

Spatial distribution of hourly trajectory endpoint frequencies

RGM Bottom 10% (day and night) Starting Height = ½ Planetary Boundary Layer

with estimated 2002 emissions of reactive gaseous mercury



0.1 degree lat/long regional grid

☆ **Piney Measurement Site**

Percent of back-trajectories passing through grid square

- 0 - 1
- 1- 3
- 3 - 6
- 6 – 10
- 10 - 100

Air Emissions

size/shape of symbol denotes amount of mercury emitted (kg/yr)

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○	10 – 50
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□	100 – 300
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⬠	500 – 1000
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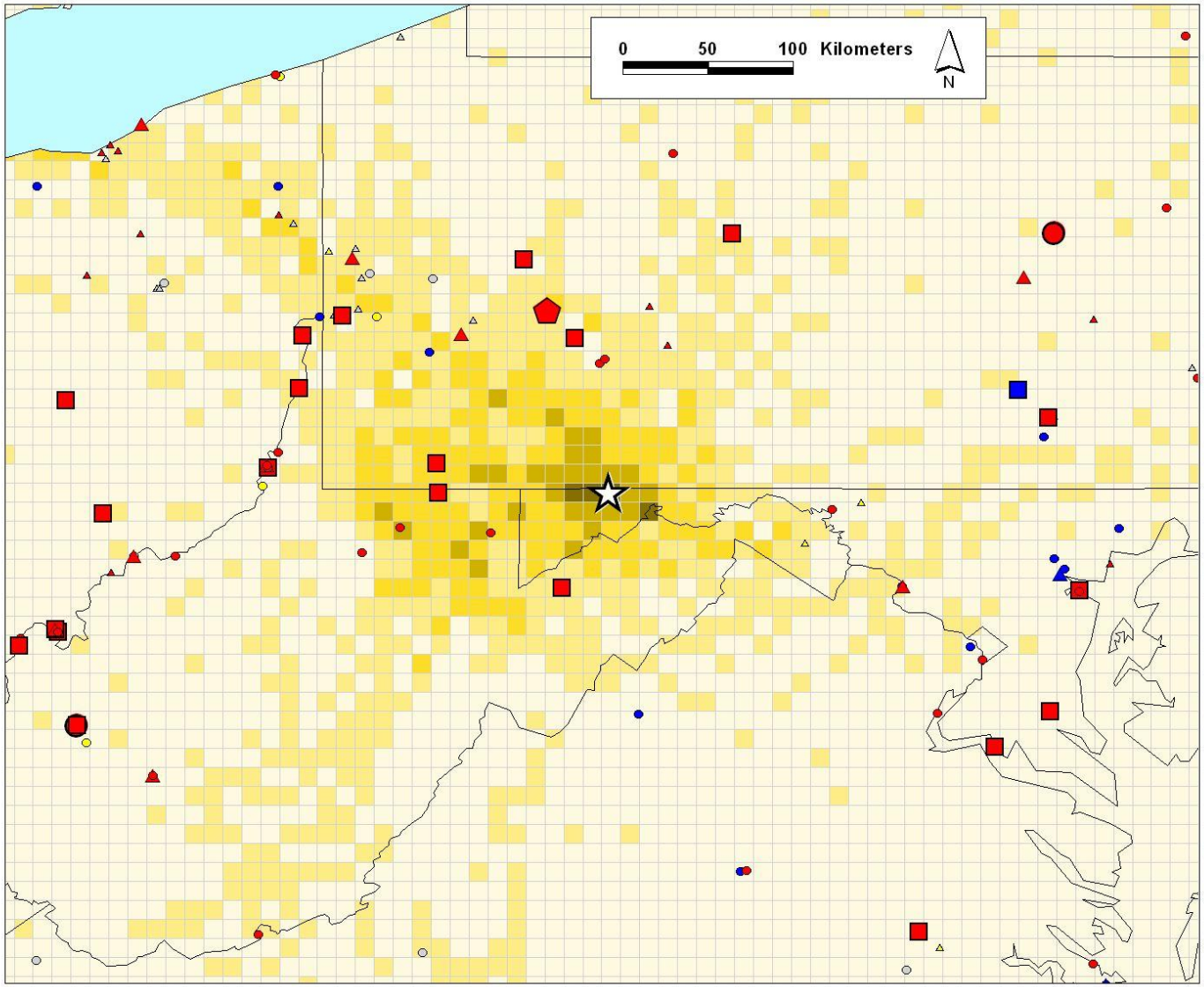
- coal-fired power plants
- other fuel combustion
- waste incineration
- metallurgical
- manufacturing & other

Spatial distribution of hourly trajectory endpoint frequencies

RGM Top 10% (day 8 AM – 6 PM) Starting Height = ½ Planetary Boundary Layer

with estimated 2002 emissions of reactive gaseous mercury



0.1 degree lat/long regional grid

☆ **Piney Measurement Site**

Percent of back-trajectories passing through grid square

0 - 1	6 – 10
1- 3	10 - 100
3 - 6	

Air Emissions

size/shape of symbol denotes amount of mercury emitted (kg/yr)

△	5 – 10
○	10 – 50
△	50 – 100
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color of symbol denotes type of mercury source

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- other fuel combustion
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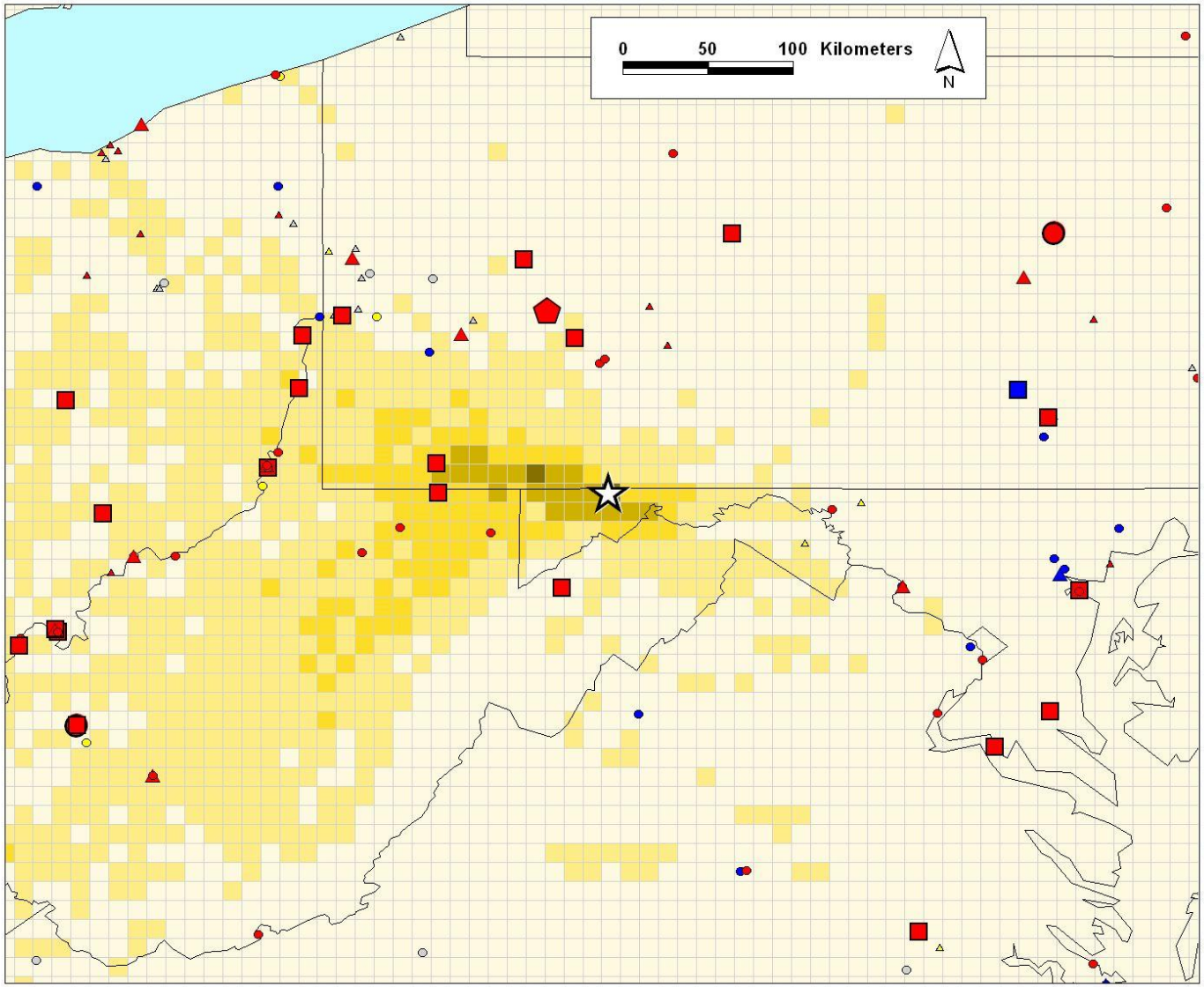
- metallurgical
- manufacturing & other

Spatial distribution of hourly trajectory endpoint frequencies

RGM Middle 20% (day 8 AM – 6 PM) Starting Height = ½ Planetary Boundary Layer

with estimated 2002 emissions of reactive gaseous mercury



0.1 degree lat/long regional grid

☆ **Piney Measurement Site**

Percent of back-trajectories passing through grid square

- 0 - 1
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- 6 – 10
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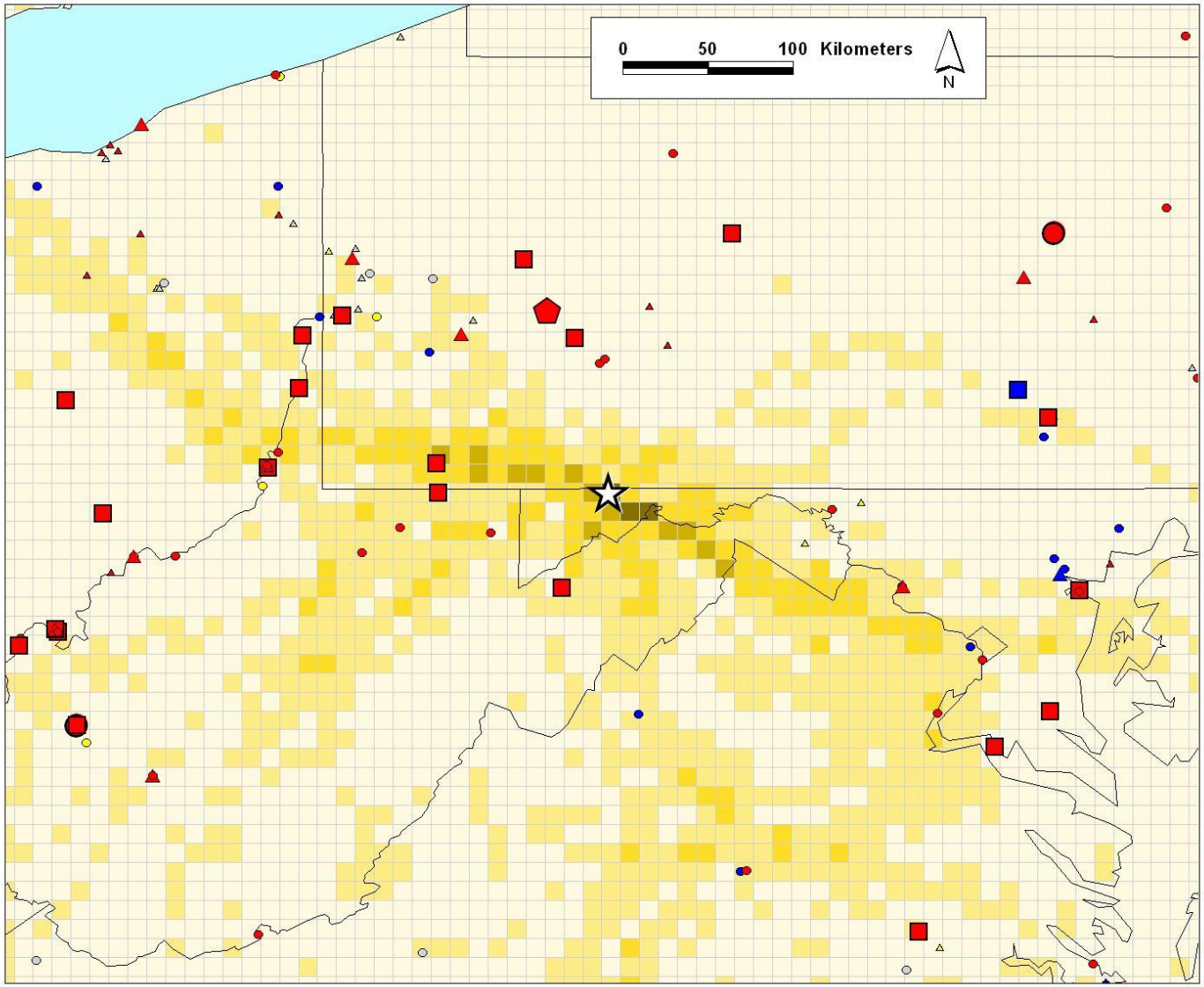
- metallurgical
- manufacturing & other

Spatial distribution of hourly trajectory endpoint frequencies

RGM Bottom 10% (day 8 AM – 6 PM) Starting Height = ½ Planetary Boundary Layer

with estimated 2002 emissions of reactive gaseous mercury



0.1 degree lat/long regional grid

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Percent of back-trajectories passing through grid square

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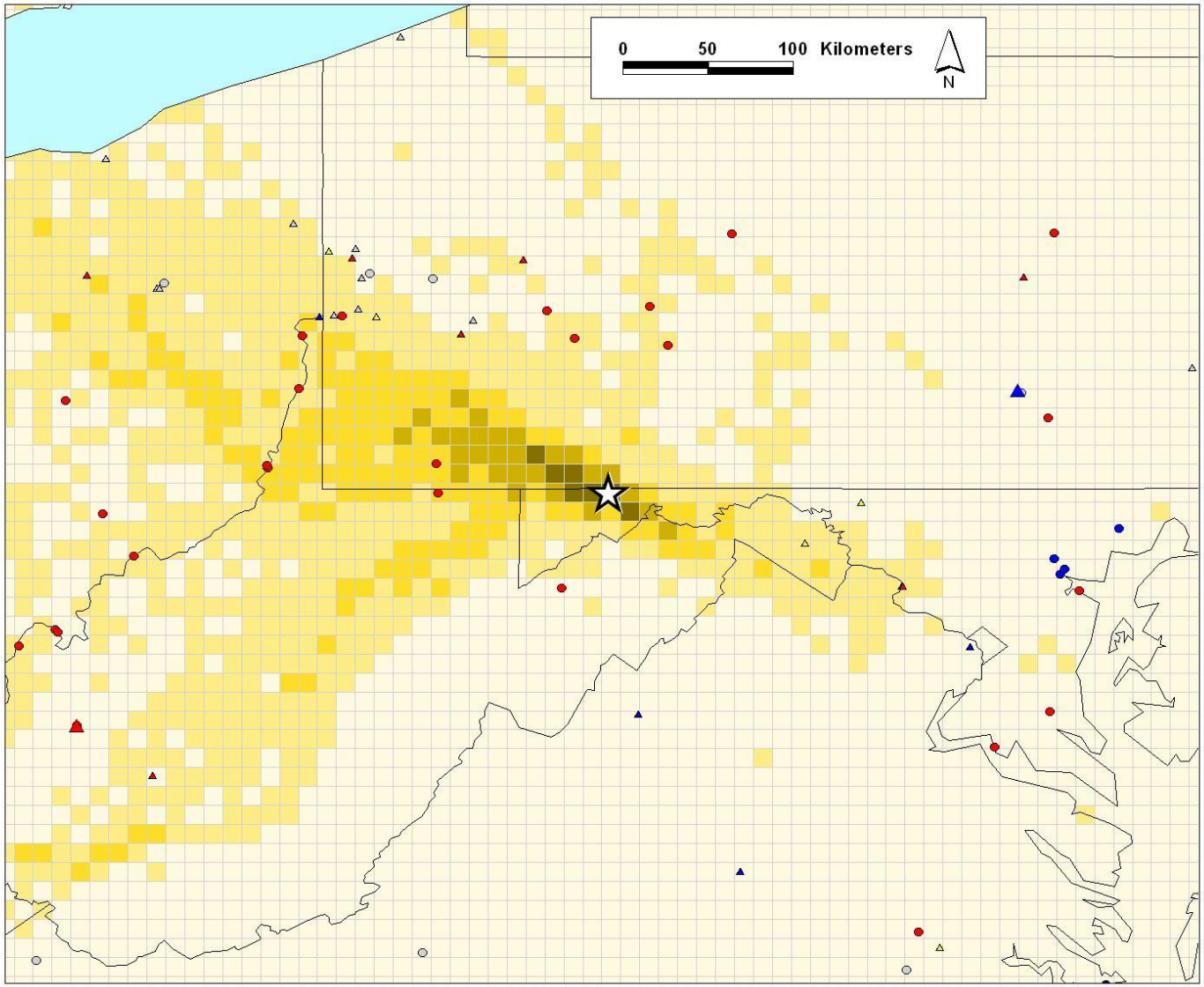
- manufacturing & other

Spatial distribution of hourly trajectory endpoint frequencies

Hg(P) Top 10% (day and night) Starting Height = ½ Planetary Boundary Layer

with estimated 2002 emissions of particulate mercury



0.1 degree lat/long regional grid

☆ **Piney Measurement Site**

Percent of back-trajectories passing through grid square

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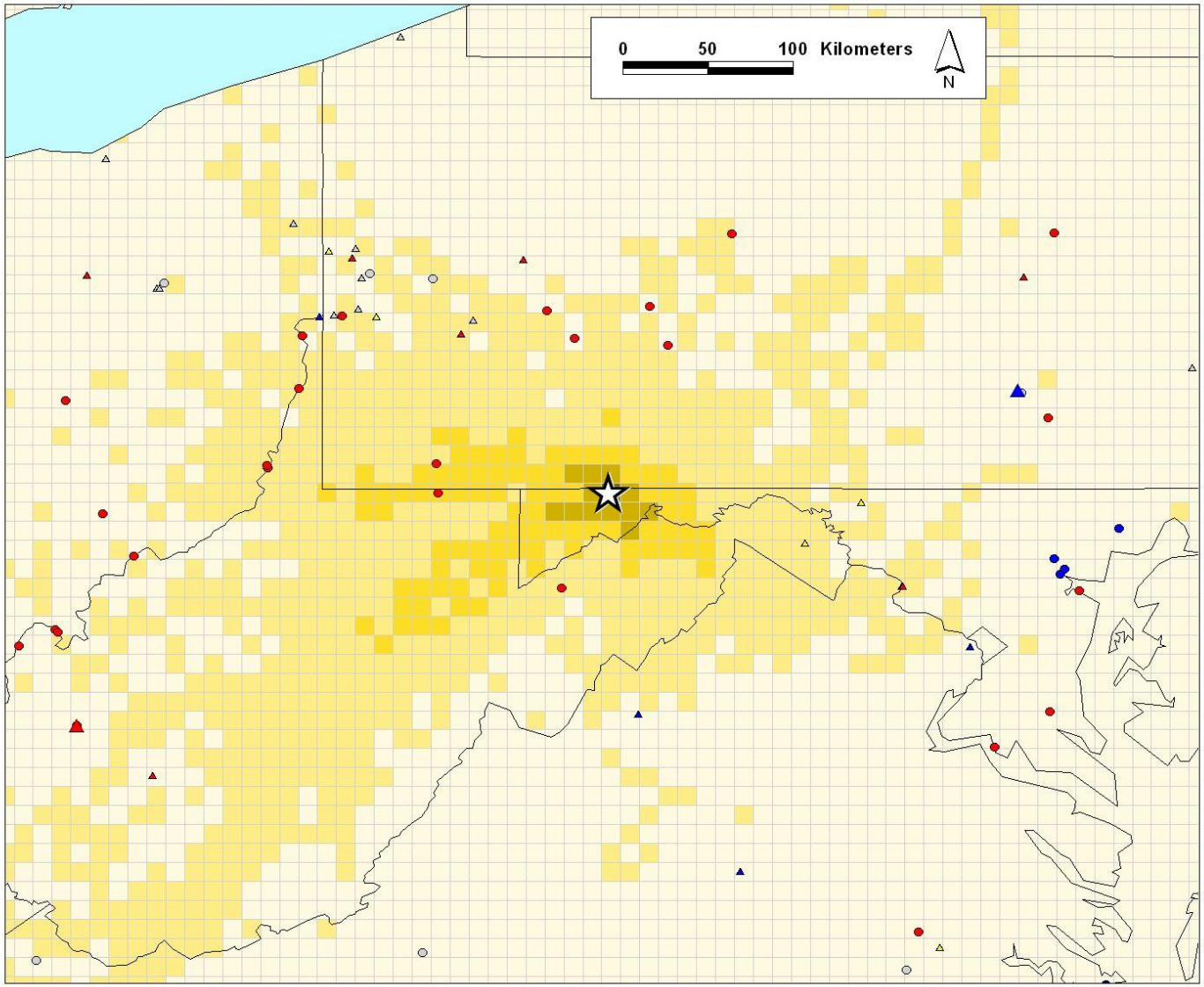
- manufacturing & other

Spatial distribution of hourly trajectory endpoint frequencies

Hg(P) Middle 20% (day and night) Starting Height = ½ Planetary Boundary Layer

with estimated 2002 emissions of particulate mercury



0.1 degree lat/long regional grid

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Percent of back-trajectories passing through grid square

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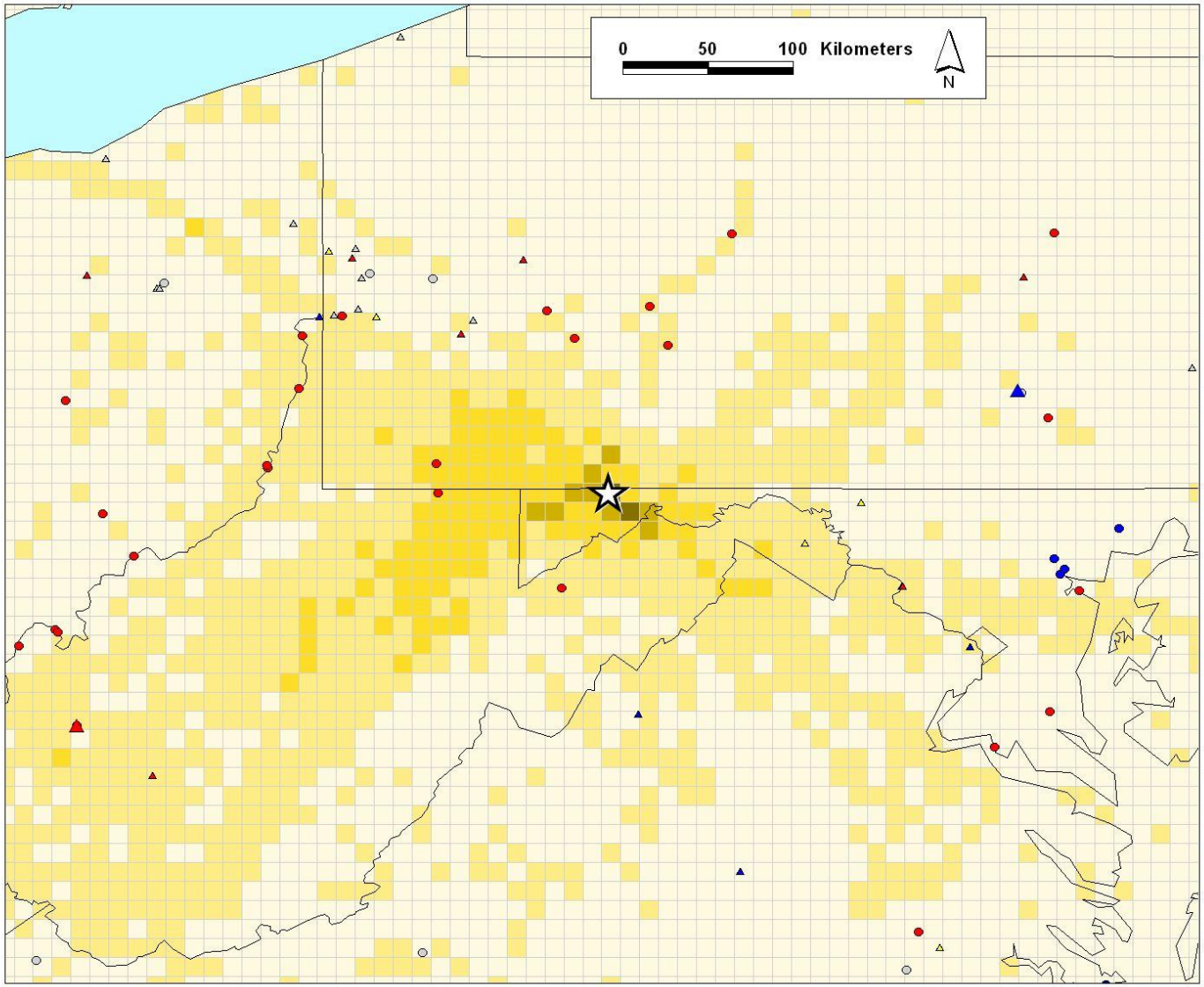
- manufacturing & other

Spatial distribution of hourly trajectory endpoint frequencies

Hg(P) Bottom 10% (day and night) Starting Height = ½ Planetary Boundary Layer

with estimated 2002 emissions of particulate mercury



0.1 degree lat/long regional grid

☆ **Piney Measurement Site**

Percent of back-trajectories passing through grid square

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- 3 - 6
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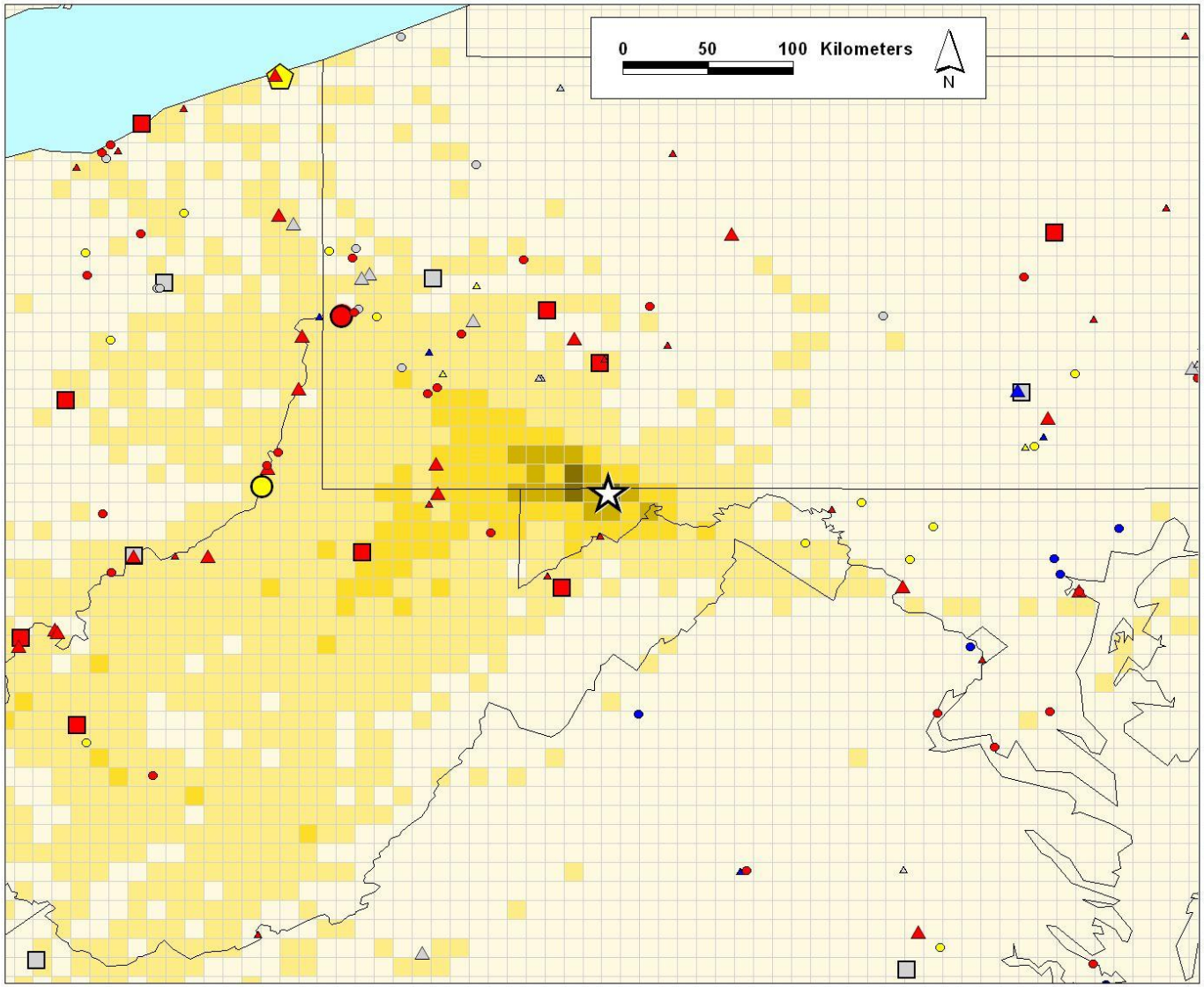
- metallurgical
- manufacturing & other

Spatial distribution of hourly trajectory endpoint frequencies

Hg(0) Top 10% (day and night) Starting Height = ½ Planetary Boundary Layer

with estimated 2002 emissions of elemental mercury



0.1 degree lat/long regional grid

☆ **Piney Measurement Site**

Percent of back-trajectories passing through grid square

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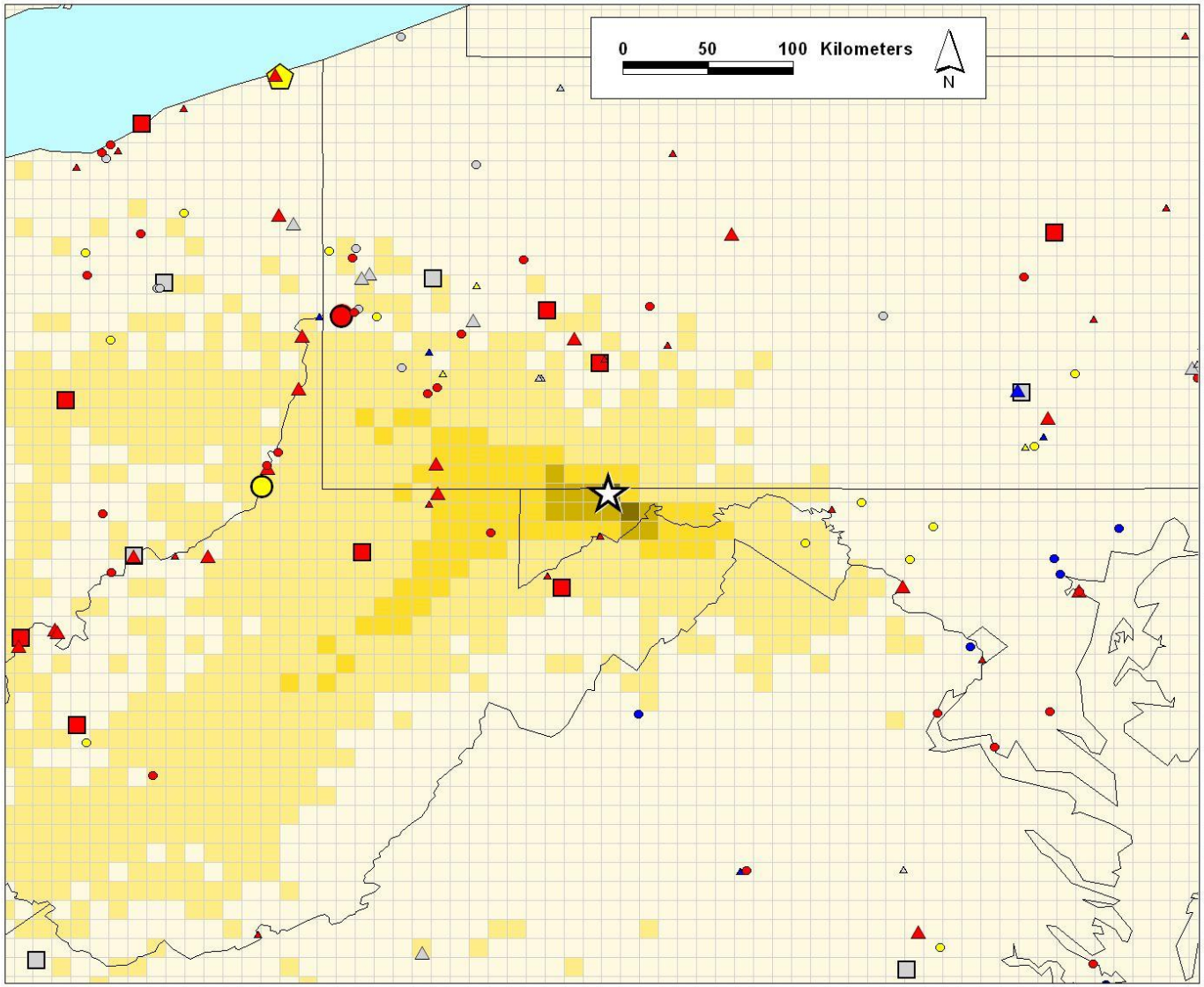
- manufacturing & other

Spatial distribution of hourly trajectory endpoint frequencies

Hg(0) Middle 20% (day and night) Starting Height = ½ Planetary Boundary Layer

with estimated 2002 emissions of elemental mercury



0.1 degree lat/long regional grid

☆ **Piney Measurement Site**

Percent of back-trajectories passing through grid square

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- 1- 3
- 3 - 6
- 6 – 10
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Air Emissions

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color of symbol denotes type of mercury source

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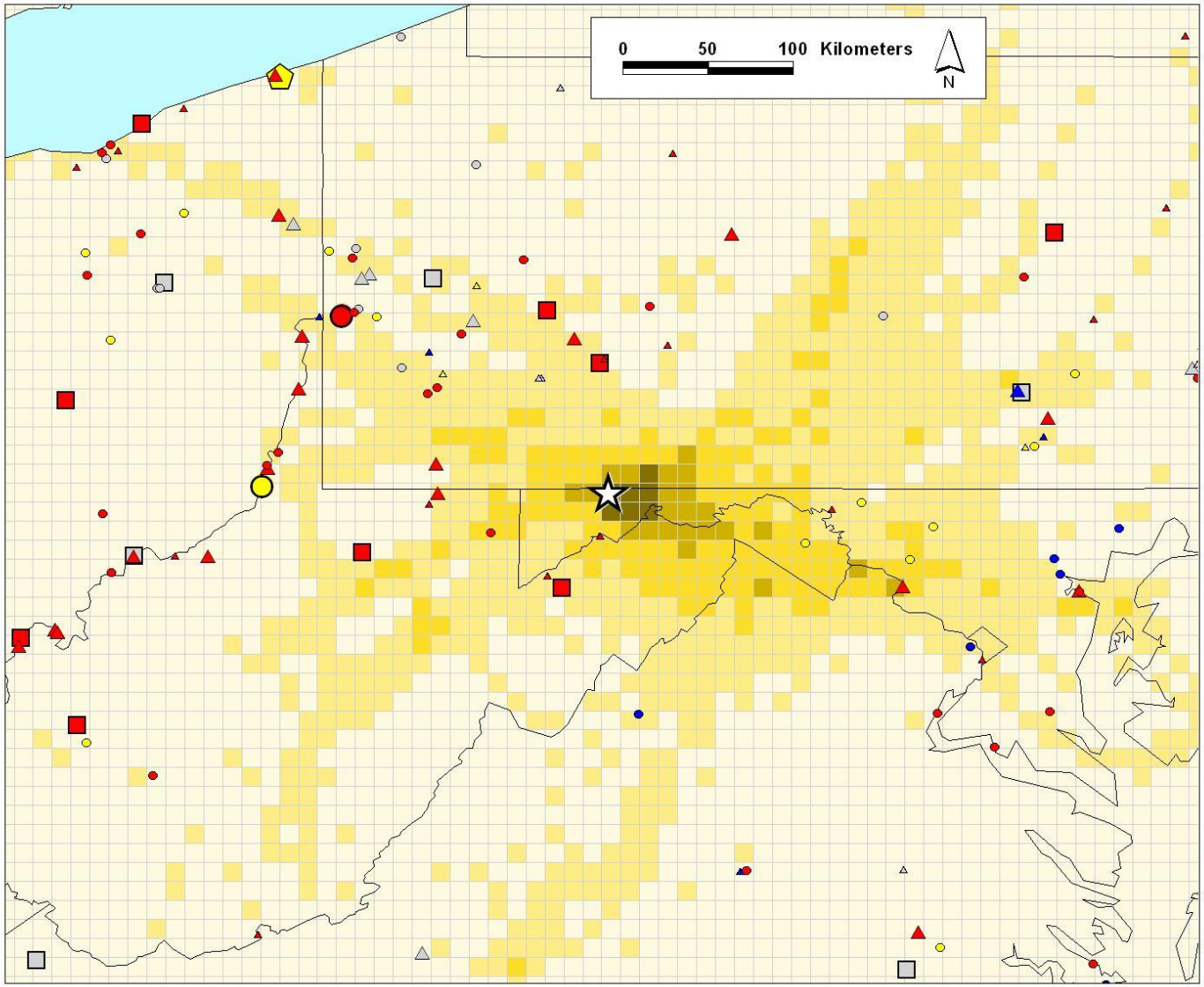
- other fuel combustion
- waste incineration
- metallurgical
- manufacturing & other

Spatial distribution of hourly trajectory endpoint frequencies

Hg(0) Bottom 10% (day and night) Starting Height = ½ Planetary Boundary Layer

with estimated 2002 emissions of elemental mercury



0.1 degree lat/long regional grid

☆ **Piney Measurement Site**

Percent of back-trajectories passing through grid square

- 0 - 1
- 1- 3
- 3 - 6
- 6 – 10
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Air Emissions

size/shape of symbol denotes amount of mercury emitted (kg/yr)

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- 1000 – 3500

color of symbol denotes type of mercury source

- coal-fired power plants
- other fuel combustion
- waste incineration
- metallurgical
- manufacturing & other